

**WHAT IS INFERENCE?
OR THE FORCE OF REASONING**

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What are we doing when we make inferences? I argue that to make an inference is to attach inferential force to an argument. Inferential force must be understood in analogy to assertoric force, and an argument is a structure of contents. I call this the “Force Account of inference.” I develop this account by first establishing two criteria of adequacy for accounts of inference. First, such accounts must explain why it is absurd to make an inference one believes to be bad. The upshot is that if someone makes an inference, she must take her inference to be good. Second, accounts of inference must explain why we cannot take our inferences to be good—in the sense that matters for inference—by merely accepting testimony to the effect that they are good. Next, I spell out the Force Account in detail, and I show that it meets these two criteria of adequacy. According to the Force Account, we make an inference by reflectively endorsing the inference as good. That allows us to understand in what sense inference is a self-conscious and active manifestation of reason. I then demonstrate that the account can be fruitfully applied to debates in epistemology and practical philosophy. In particular, I show that the Force Account gives us the resources to settle debates about inferential internalism and pure moral testimony.

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PREFACE

I was once working at a home for people with psychiatric diseases. One day, a woman living there was, as usual, giving voice to her delusions over lunch, when one of her roommates had enough of this. Being a very nice lady, the second woman calmly explained to the first: “You know, these things are just what you are thinking right now. That’s totally fine. It’s just that they clearly aren’t true.”

Why is this story funny? One thing that is funny about it is that the second woman seems to suggest that the first woman should go on having the thoughts she has but should simply stop thinking that they are true. But having these thoughts just is taking them to be true. Once we realize this, however, we have to face a philosophical puzzle. How can it be that thinking something and thinking that it is true are one and the same thought? After all, there must surely be a sense in which these are different thoughts.

This is the kind of philosophical puzzle—applied to the case of inference—that motivates the ideas collected in this dissertation. My ultimate goal is to get clearer about what it means to be a rational creature. If I had to put the ideas below into a slogan, it would be: To be rational—rather than arational—is to do things by taking them to be rational—rather than irrational. On the view I shall recommend, an act of reason is one that happens because of its (sometimes merely apparent) rationality, where this is not the “because” of causation.

Anything that might be of any value in this dissertation owes its existence to the generous help I received from other people. First and foremost this applies to my teachers, whom I want to thank for their support, encouragement and inspiration.

Robert Brandom taught me how to think of myself as a philosopher and showed me how to keep my eyes on what really matters. His comments and suggestions permeate every bit of this dissertation, but he always saw my project through my eyes and helped me find my

own way. I received more help, support, and encouragement from Bob than anyone could ever reasonably expect from any teacher.

In the many meetings with James Shaw, he infallibly came up with possible responses to my arguments that I hadn't anticipated, exposed confusions in my ideas, and helped me to clarify them. His help in seeing my own work with a fresh pair of eyes was invaluable.

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I also want to thank the many philosophers who were willing to listen to or read inchoate expressions of my ideas without complaining about the pain this must have caused. Thank you Ori Beck, Christian Kietzmann, Sebastian Rödl, Christoph Pfisterer, David Kästle, Jonas Held, Jonathan Way, Conor McHugh, Crispin Wright, Jack Woods, Adam Marushak, Ian Blecher, Mikio Akagi, Jonathan Surovell, Lok-Chun Kelson Law, and Jonathan Buttaci.

It is impossible for me to do justice to even a little bit of what I owe to Katharina Nieswandt—and not only because there is no justice within the household. I wouldn't be myself without her.

1.0 INTRODUCTION

What is inference? What are we doing when we make inferences? It will be the main aim of this dissertation to answer these questions. In a nutshell, my answer will be that making an inference is a mental act in which we attach what I call “inferential force” to an argument, which is a structured set of contents consisting of the premises and the conclusion. This act of attaching “inferential force” is constituted by a reflective endorsement of the resulting inference as correct or good. In other words, we make an inference by ‘taking’ the inference to be good. This ‘taking’ is neither a belief nor a judgment. It must be understood in analogy with the ‘taking-to-be-true’ that is constitutive of judging and the ‘putting-forward-as-true’ that is constitutive of asserting. It will take considerable work, however, to develop that account, and so this telegraphic pointer in the direction in which we are headed must suffice for now.

Why should anyone care about a philosophical understanding of inference? Because philosophy ought to give us orientation—in both, our thinking and our acting. Philosophy helps us to know our way about ([Wittgenstein](#), *PU* §123). One area in which we want orientation is that of understanding ourselves. Since we are rational animals, we need to understand what it means to possess reason. But the actualization of reason *par excellence* is inference. So we must understand inference.

The centrality of inference for our rational nature goes very deep. We can arguably understand neither knowledge, nor mental content, nor virtue without at least some understanding of inference. After all, it is difficult to see how we could understand what justification is without thinking about the relation between the premises and the conclusion in a good inference. Similarly, it is unclear why anything should count as a contentful mental state unless it can occur in rational transitions between mental states, of which the paradigm

is inference. And we cannot understand what virtue is without grasping what it means to act for the right reasons, which in turn cannot be understood without bringing in the idea of practical reasoning. Of course, I cannot argue for these huge claims here. What I want to bring out is merely that anyone who thinks that these claims—or something close enough to them—is true has excellent reasons to care about an account of inference.

Unfortunately, inference seems not only to be of importance to almost any area of philosophy, the idea of an inference also seems to be caught in a large circle of ideas, to which the ideas of knowledge, mental content, and virtue also belong. In any event, I cannot find a way out of this circle in this dissertation. This means that while I hope that my account of inference will ultimately shed light on phenomena like knowledge, mental content, and virtue, I am relying on these ideas in developing my account of inference. So all I can offer is something in the spirit of a Strawsonian “connective analysis.” Trying to give a more reductive account is an admirable project, but I am afraid that the chances of success are slim. Thus, I shall be happy if I can make some progress on the less ambitious project.

1.1 GETTING THE TOPIC INTO VIEW

The right place to start in philosophy is, of course, in the middle ([Stalnaker, 2008](#)). For the case at hand, this means that we must start in the middle of a jungle of things that one could mean by the words “inference” and “to infer.” So, in this section, I shall draw a couple of distinctions and locate the topic I want to get into view relative to them.

Let’s begin with two examples: I can come to know that I have forgotten my keys at home by inferring it from the premises that otherwise they would be in my pocket and that they are not in my pocket. Similarly, I can come to do what I ought to do by making a practical inference like the following: “She needs me to sign this document, and I can do so without causing any damage or harm to anyone. So I shall sign the document.” My topic will be inference in the sense in which theoretical inferences can give us knowledge and practical inferences can enable us to act well.

I shall not argue for the claim that theoretical and practical inference should be given a unified treatment. I will simply assume that Kant is right in holding that there can “in the end be only one and the same reason that is distinguished merely in its application” (Kant, AA4, p.391). The dissertation as a whole will show that we can give a unified account of theoretical and practical inference; and I take this to be a virtue of the account I am developing here.

The mental occurrences that I want to think about can be ascribed to the thinker as a whole and they are such that they can, at least typically, be brought to consciousness. Hence, not just any old transition between contentful mental states that is sensitive to the contents of these states will count as an inference for my purposes. An inference, in the sense that I am interested in, must be something in which the thinker, as a whole, exercises her rational faculties. Moreover, an inference cannot be a merely automatic sequence of thoughts. For something to be an inference, it must make sense to criticize the thinker as having made a mistake. After all, if you cannot go wrong in arriving at a new belief or at an action, you cannot count as knowing or acting well. So what we are interested in are person-level exercises of rational faculties in which the subject can make a mistake and that can result in the subject gaining knowledge or coming to act well.

In order to sharpen this initial characterization a little bit further, let’s distinguish inference from some related exercises of rational capacities. Sometimes inferring is equated with reasoning, or deducing, or even proving. However, my topic is distinct from these other phenomena.

There is a broad sense of “reasoning” in which inferring is one kind of reasoning. Inference is the kind of reasoning that can naturally and completely be expressed by using words like “therefore,” “hence,” “thus,” and the like, proceeded by the premises and followed by the conclusion. Other kinds of reasoning include the construction of theories, going through a thought experiment, weighing the pros and cons of a course of action, deliberating (in the sense of what happens before a decision is reached), reflecting on a subject matter in order to come up with an idea, and the like (see Grice, 2001, p. 18). These latter kinds of reasoning are not inferences, which comes out in the fact that we don’t usually express them by saying things like “A. Therefore, B.” There is also a narrow sense of “reasoning” on which it means

roughly the same as “inferring.” (I will sometimes use “reasoning” in this way when no confusion can arise.)

Deducing and proving differ from inferring in a number of ways. First, an incorrect deduction or proof is no deduction or proof at all, whereas an incorrect inference is still an inference. It’s just a bad one. Second, proving and deducing can be done in order to obey a command or request. A problem on an exam may read, e.g., “Please deduce Q from P ” or “Please prove that Q , given the fact that P .” But saying “Please infer Q from P ” is infelicitous (see [Rumfitt, 2011](#); [White, 1971](#)). By the same token, we cannot promise to make particular inferences, nor can we decide to make them. Third, deducing and proving is something that can be done quickly or slowly, and it can be interrupted in the middle, it can be done efficiently or inefficiently. Inferring, by contrast, cannot be done slowly or quickly, it cannot be interrupted in the middle (except in the sense in which a chain of inferences can be interrupted), and it cannot be done efficiently or inefficiently. To be sure, you cannot prove or deduce anything if you cannot make any inferences, but that doesn’t mean that they are the same thing.

What I am interested in is neither reasoning in general, nor the activities of deducing or proving something. Rather, I am interested in the kind of reasoning that is naturally expressed by using words like “therefore,” that cannot be interrupted (except insofar as a chain of it can be interrupted), that cannot be done quickly or slowly, that cannot be done in response to an order or request, or to honor a promise.

Even after we have made these distinctions, there are some further sources of potential confusion that need to be avoided. When someone asks me, “How do you know that she is home?”, I might answer: “I infer it from the fact that her car is in the driveway.” Or I might say: “I *inferred* it from the fact that her car is in the driveway.” By giving the first answer I give expression to the fact that I believe that she is home on the ground that her car is in the driveway. The second answer allows for the question: “When did you make that inference?” Hence, it seems to report something that happened in my personal history. Besides these two uses of “infer” and “inference”, we (especially the logicians among us) sometimes use “inference” to mean a kind of abstract object—typically an ordered pair of

a set of propositions and a proposition. Thus, “inference” seems to be polysemous. It can mean:

- (i) Something—we don’t know yet what—by which people arrive, e.g., at a belief on the basis of certain considerations at a particular point in time. I shall call this “inference” or “inferring,” and when the extra clarification is needed I will sometimes use “dynamic inference.”
- (ii) A condition people are in, e.g., when they believe something for a reason. I shall sometimes call this “static inference” but more often just “believing for a reason” or something the like.
- (iii) A structure of contents, such as an ordered pair of a set of propositions and a proposition. I shall call these things “arguments.”

I am primarily interested in the first of these, i.e. in inference as what happens when someone is inferring—making an inference—at a particular point in time. Once we see the distinction between “dynamic inference” and “static inference,” however, we are immediately facing the question how they relate to one another.

Given the distinction between inference—the ‘dynamic’ phenomenon—and the condition of holding an attitude on the basis of other attitudes, the question arises whether what I am going to say applies only to one of the two phenomena. In fact, some think that some of the things I will argue for below—such as the claim that if you make an inference, you must ‘take’ your inference to be good—are only true of the ‘static’ phenomenon and not of ‘dynamic’ inference ([Setiya, 2013](#)).¹

¹ Gilbert Ryle ([1949](#), p. 260), for example, writes: “[T]he words ‘judgment’, ‘deduction’, ‘abstraction’ and the rest belong properly to the classification of the products of pondering and are mis-rendered when taken as denoting acts of which pondering consists. They belong not to the vocabulary of biography but to the vocabulary of reviews of books, lectures, discussions and reports. They are referees’ nouns, not biographers’ nouns.” Similarly, Donald Brown ([1955](#), pp. 354-55) says: “[I]nsofar as we read off the nature of inferring from the use of the verb ‘infer’ in the present tense, inferring is a matter of holding views and having reasons for them. If inferring is this sort of thing, rather than being like discovering or inquiring or thinking of or having it occur to one, then it is understandable that there should be no continuous tense [...]. To infer is to think that something is so. But it is not to think, in the sense in which one does two things when one sits and thinks hard, and only one thing when one just sits. [...] Inference is not that kind, or any kind, of activity.” For a critical response to such views, see White ([1971](#)).

I would like to point out that, as far as I can see, this criticism will not work against the view I am presenting below.² While I am focusing on ‘dynamic’ inference, the arguments I shall be presenting below go through, with some obvious and minor changes, for ‘static’ inference as well. I will assume throughout the dissertation that inferring stands to holding-one-attitude-on-the-basis-of-others as judging stands to believing. In both cases, the first happens at a point in time while the second happens over a stretch of time. This shouldn’t be surprising. After all, believing something for a reason, e.g., is a way of believing something. Similarly, making a theoretical inference is often a way of judging that things are thus and so—on the basis of other things. As Frege puts it: “To make a judgement because we are cognisant of other truths as providing a justification is known as inferring” (Frege, PW, p. 3). If this parallel between ‘dynamic’ and ‘static’ inference holds, the account of inference I am presenting below is at the same time an account of the basing relation. However, I will for the most part focus on ‘dynamic’ inference.

Two final clarifications are in order before we move on: First, I will focus on single-step inferences throughout the dissertation. Chains of inferences will come up occasionally, but I assume that we can understand such chains once we understand the single-step inferences of which they are made up. Second, I call the attitudes from which an inference “starts” its “premise-attitudes.” The attitude that results from an inference I call the “conclusion-attitude.” The premises of an inference are the contents of its premise-attitudes. The conclusion of an inference is the content of its conclusion-attitude.

² The Force Account I shall present below gets around, e.g., all the objections Kieran Setiya (2013, pp. 185-189) has raised against such a view for dynamic inference. Moreover, the view does not force us to say—as does Setiya’s view—that you can make an inference without ‘taking’ your inference to be good but you cannot believe something for a reason without ‘taking’ your reason to be evidence for your belief. A proleptic remark is necessary here: Setiya holds that if “you believe that p on the ground that q , you take the fact that q as evidence that p ” (Setiya, 2013, p. 187). And he also holds that “[i]n order to be rational when you take the fact that q as evidence that p , you must infer this proposition from some other belief” (Setiya, 2013, p. 186). But “it is not a condition of being justified by evidence that one take that evidence to support one’s belief” (Setiya, 2013, p. 188). The upshot of all this is that in order to believe that p on the ground that q , you must infer that q is evidence for p from some other belief; but you have to do this without thereby believing that q is evidence for p on the basis of this other belief—despite the first belief being justified by the second. Holding such a combination of theses strikes me as a cost worth avoiding if at all possible. After all, if justification by evidence doesn’t require taking the evidence to support what it justifies, it is difficult to see why believing something for a reason requires taking one’s reason to support one’s belief. Thus, Setiya’s position seems to be one of last resort, which we shouldn’t take up unless we are forced to do so. One upshot of this dissertation will be that we are not forced to do so.

1.2 WHAT'S THE PROBLEM?

We now have a rough idea of the phenomenon that will be the topic of this dissertation. Why aren't we done already? Hasn't the previous section provided an answer to the question what inference is? Why do we have to dig deeper than that?

The problem I want to address in this dissertation is ultimately a problem that arises for all manifestations of our rational capacities: How do such manifestations relate to an endorsement of the manifestation as correct? How does, e.g., a judgment relate to the endorsement of the judgment as correct? For the case of inference the question becomes: How is the act of inferring related to an endorsement of the act as correct? My treatment of inference is ultimately merely a particular case of trying to answer this more general question. But I think inference is a particularly important and interesting example.

The question how inference relates to the endorsement of the inference as correct is philosophically interesting because it gives rise to a philosophical puzzle. On the one hand, it seems that I cannot make an inference without endorsing the inference as correct. In fact, it seems that once I appreciate the connection between the premises and the conclusion in the right way, I have already made the inference. There isn't any extra step that I'd need to take in order to make the inference. On the other hand, it seems implausible that in order to make an inference I must believe that the inference is correct. After all, the most fundamental way of finding out what follows from what is to reason from one content to the other. And in any case, simply adding a belief that an inference is correct to a transition between mental states doesn't turn this transition into an inference. The endorsement of the inference and the inference itself must be connected in a more intimate way.

Of course, we could deny that making an inference involves endorsing the inference as correct. Or we could claim that the belief that the inference is correct is really what is needed. Both of these options, however, seem more like the kind of thing one adopts in order to avoid trouble, rather than options one adopts because they are intrinsically compelling. It can seem that we are stuck between a rock and a hard place and have to choose the option that is overall least damaging. I think we can do better than that, and the project of this

dissertation is to show how. I want to develop a view that allows us to see what role the endorsement of an inference plays in the inference itself that is also intrinsically compelling.

If I am right that the problem of how an act relates to the endorsement of the act arises for all manifestations of our rational capacities, the problem of this dissertation will have ramifications for our understanding of what it means to be a rational creature. I think, however, that the connection is even closer than that. For I think that two kinds of understanding that are central to philosophy have their birth place in the endorsement that is involved in inference: epistemic (and ultimately semantic) understanding and ethical understanding. Our most fundamental grasp of what is a reason to believe what is present in the endorsement of theoretical inferences. And our most fundamental grasp of what we should do is present in the endorsement of practical inferences. You don't have to believe these claims in order to find my account interesting. But I do believe them, and that is why I see my project as an attempt to describe our epistemic and ethical understanding *in statu nascendi*.

1.3 THE PLAN

Here is the plan for the rest of the dissertation: In the next two chapters, I shall motivate two criteria of adequacy for accounts of inference. In particular, I will show in Chapter 2 that accounts of inference must explain what I call the “Inferential Moorean Absurdity.” As we will see, this implies that if you make an inference, you ‘take’ your inference to be good. Chapter 3 argues that a good account of inference must also explain why this ‘taking’ cannot be shared via testimony—a feature which I call the “*Jemeinigkeit*” of inference. This rules out views on which the ‘taking’ in question is a belief or judgment.

In Chapter 4, I present my positive view, which I call the “Force Account of inference.” I argue that we should understand inference in analogy to judgment. We should think of judgment as an act of attaching doxastic force to a judgeable content. Similarly, we should think of inference as an act of attaching inferential force to an argument. I explain how

these different forces interact in an inference. This allows us to explain how we arrive at new judgments by making inferences.

In Chapters 5 and 6 I apply the Force Account to debates in epistemology and moral philosophy, respectively. In particular, I argue in Chapter 5 that the Force Account gives us a novel perspective on inferential internalism. It provides us with the resources to give an account of inferential justification that does justice to the motivations behind inferential internalism without falling prey to the usual objections against it. In Chapter 6, I turn to the debate about pure moral testimony. I argue that the Force Account offers a compelling explanation of what is wrong with (an important class of) cases of pure moral testimony.

2.0 ‘TAKING’ ONE’S INFERENCE TO BE GOOD

In this chapter, I argue that if someone makes an inference, she takes her inference to be good. Let’s call this claim TAKE.

TAKE If someone makes an inference, she ‘takes’ her inference to be a good inference.

I use scare-quotes around “take” in order to indicate that we shouldn’t assume that we already know what exactly this ‘taking’ actually is. My argument for TAKE rests on a phenomenon that I call the “Inferential Moorean Absurdity” (IMA).

That inference involves a ‘taking-one’s-inference-to-be-good’ implies that a whole family of extant accounts of inference must be wrong, namely views that try to understand inference exclusively in terms of merely causal connections, dispositions, and the like (e.g. [Wright, 2014](#); [Winters, 1983](#); [Armstrong, 1968](#)). As I will bring out in Section 2.2, the thesis also rules out views that might not seem to belong to this family, such as Paul Boghossian’s ([2014](#)) view. I will end my discussion of the Inferential Moorean Absurdity and its implications by considering a couple of objections—some of which have recently been raised by Conor McHugh and Jonathan Way ([2016](#)).

The insight that inferring involves some kind of appreciation of the connection between the premises and the conclusion, i.e. the result of this chapter, brings us face to face with the question what this ‘taking’ is. This is the question that will then point the way forward.

Before we delve into the argument, let’s start with a quick bird’s eye view of the dialectic. The idea that if someone makes an inference, she must see an appropriate connection between the premises and the conclusion seemed almost platitudinous to many philosophers. John Locke, for example, writes about the case of inductive inference:

[W]here the mind does not perceive this probable connexion, where it does not discern whether there be any such connexion or no; there men's opinions are not the product of judgment, or the consequence of reason, but the effects of chance and hazard, of a mind floating at all adventures, without choice and without direction. (Locke, *An Essay Concerning Human Understanding*, 4th ed., book IV, ch. 17.2)

Charles Sanders Peirce agrees, and he even gives us a classification of mental acts based on this insight:

[I]n reasoning we should be conscious, not only of the conclusion, and of our deliberate approval of it, but also of its being the result of the premiss from which it does result, and furthermore that the inference is one of a possible class of inferences which conform to one guiding principle. Now in fact we find a well-marked class of mental operations, clearly of a different nature from any others which do possess just these properties. They alone deserve to be called reasonings; and if the reasoner is conscious, even vaguely, of what his guiding principle is, his reasoning should be called a logical argumentation. There are however, cases in which we are conscious that a belief has been determined by another given belief, but are not conscious that it proceeds on any general principle. Such is St. Augustine's "*cogito, ergo sum*." Such a process should be called, not a reasoning but an acritical inference. Again, there are cases in which one belief is determined by another, without our being at all aware of it. These should be called associational suggestions of belief. (Peirce, 1905, p. 483)

Bertrand Russell (1920), Judith Thomson (1965) and Barry Stroud (1979) also hold views along these lines. And more recently Paul Boghossian (2014, sec. 3) has endorsed what he calls the Taking Condition on inference.¹

Taking Condition Inferring necessarily involves the thinker taking his premises to support his conclusion and drawing his conclusion because of that fact.

Unfortunately, advocates of the view that inference involves 'taking one's inference to be good' or 'seeing a connection between premises and conclusion' provide hardly any arguments for this claim. I suspect that it seems obvious and not in need of defense to most of them. This has led to some resistance. Some object that young children and animals cannot 'take' their inferences to be good but can nevertheless make inferences. Others think that the idea leads to a vicious regress. I will begin discussing some worries towards the end of this chapter.

¹ Boghossian takes the idea from Frege, who says: "To make a judgment because we are conscious of other truths as providing a justification is known as inferring" (Frege, 1979, p. 3).

Before discussing objections, however, I want to fill the argumentative lacuna and provide an argument for the claim that if you make an inference, you ‘take’ your inference to be good (Section 2.1). Spelling out the argument has the additional benefit of telling us something about what it means for this claim to be true. In fact, it will be much easier to assess different accounts of inference and to address the two kinds of objections just mentioned once we have a better grasp of why we should accept the idea that an inferring subject ‘takes’ her inference to be good. I will begin with such an assessment in Section 2.2. Next I turn to some objections to my argument (Section 2.3). I end with an excursion regarding the question how Moorean my “Inferential Moorean Absurdities” are (Section 2.4).

2.1 INFERENCEAL MOOREAN ABSURDITY

There is a natural picture according to which beliefs, intentions, judgments, and similar attitudes stand in rich normative relations to each other. Having certain combinations of such attitudes rationally excludes having others, and sometimes one is rationally required to take up a certain attitude given the rest of one’s attitudes (and supposing that one doesn’t change them). These relations are typically seen as determined by the content to which one has an attitude and which kind of attitude one has to this content. Believing that it is impossible for you to fly like Superman, e.g., is in rational tension with the intention to do it. From this perspective, inference can seem like a “self-help mechanism,” which allows us to get our attitudes to conform to the requirements of rationality (Broome, 2013, p. 207). This suggests that inference is not itself a node in this rich network of normative relations. For this would mean that making inferences does not only “clean up” our attitudes but also introduces a new act into the mix, which must itself be in rational harmony with the rest of our mental acts. And if this isn’t automatically the case, another self-help mechanism would be required. Moreover, the idea that we can determine the normative relations between mental acts by looking at the nature of the acts and their contents seems to break down for inferences. After all, it is not clear what could be meant by *the* content of an inference.

It will become clear in this section that inferences can in fact be in immediate rational tension with other mental acts, such as beliefs. This undermines the picture just sketched. Once we have seen this, we will have to steer a middle course between the temptation to assimilate inference too much to propositional attitudes and the danger of falling back into a view on which the immediate rational tensions between inferences and other mental acts seem inexplicable. Finding this middle way is one of the most challenging parts of the overall project. In this chapter, we'll see the first glimpses of the challenge.

Here is the plan for the rest of this section: I first introduce the phenomenon that I call the “Inferential Moorean Phenomenon” (Sec. 2.1.1). I then argue that this phenomenon lends support to the idea that inferring involves ‘taking’ one’s inference to be good (Sec. 2.1.2). I end by discussing how we should think about the ‘content’ of this ‘taking’ (Sec. 2.1.3).

2.1.1 Introducing the Absurdity

Suppose someone (consciously) makes an inference and also (consciously) believes that this inference is not a good inference—in whatever sense an inference must be good in order to live up to the standards that govern the inference (evaluated as the kind of inference it is). That is, suppose someone is having thoughts that are naturally expressed by assertions that are instances of the following schema, which I call “Inferential Moorean Absurdity”:

(IMA) A_1, \dots, A_n ; therefore, B . But the inference from A_1, \dots, A_n to B is not a good inference (according to the standards that govern this inference).

Such a person would not be rational. Borrowing a phrase from G. E. Moore (1942, p. 543), we might say that (IMA) is a “perfectly absurd thing to say.”² It seems that the thoughts of someone who thinks an instance of (IMA) are in rational tension with each other. One way to bring this out is to realize that asserting an instance of (IMA) seems self-defeating (given that the person does not change her mind after asserting the first sentence). If the assertion is sincere, the person is not in a coherent state of mind, or so it seems.

² Eric Marcus (2012) discusses a similar but distinct variation on Moore’s Paradox. His variant is: “ q , so p ; but I don’t believe that p because I believe that q .” He is interested in the “because.”

This holds not only for instances of (IMA); it also applies to cases in which the reasoner is suspending judgment on whether or not her inference is good. To see this, suppose someone has thoughts that can naturally be expressed by an instance of the following schema:

(IMA') A_1, \dots, A_n ; therefore, B . But for all I know the inference from A_1, \dots, A_n to B may not be a good inference (according to the standards that govern this inference).

Here I am thinking about suspending judgment as an attitude and not just as the lack of any attitude (see [Friedman, 2013](#)). As is clear from (IMA'), I have in mind the kind of attitude you could express by saying “for all I know, the inference might be a bad one.” In this sense, then, making an inference is in rational tension with believing that the inference is not good and also with suspending judgment on the matter.

Notice that the irrationality of making an inference one believes to be bad (or one regarding the goodness of which one is suspending judgment) is transparent from the perspective of the reasoning subject. It is not just that the subject must have made a mistake: either her inference is not good or her belief is false. Rather, that something is going wrong, rationally speaking, is patently obvious from the perspective of the reasoner. The rational tension between the inference and the belief (or suspension) is immediate, in the sense of being obvious or transparent. This is why I call such thoughts “absurd;” the subject is doing something that flies in the face of reason by her own lights. We can describe this phenomenon—which I call the “Inferential Moorean Phenomenon”—as follows:

(IMP) It is irrational, and transparently so from the subject’s own perspective, to do both, infer B from A_1, \dots, A_n and also believe that this is not a good inference or having the attitude of suspending judgment on whether the inference is good.

It seems to me that the truth of (IMP) should be uncontroversial. However, I have to say a bit more about how (IMA) and (IMP) are to be understood. For it might seem that there are cases in which thinking an instance of (IMA) is not absurd.³

Under what conditions is a thought that fits the schema of (IMA) absurd? I can think of only two kinds of situation in which such a thought is not absurd:

(a) cases in which the subject is not making an inference,

³ The same points also apply to (IMA') but I will suppress mentioning (IMA') for the sake of simplicity.

(b) cases that involve two standards of goodness for inferences.

Mere association of thoughts is an example of the first kind. A psychologist, for example, might think that the phenomenon of in-group favoritism involves an “unconscious inference,” where this means nothing more than that there is a chain of thoughts or of content-sensitive transitions between mental states. It is not absurd to think something like: “The opposing football team is playing a lot worse than we are, and they are only in the lead because of sheer luck. But my thinking this is probably just the result of in-group favoritism.” In such cases, we simply acknowledge that we are subject to well-known biases. And such an acknowledgment seems eminently rational. Of course, this should lead us to reconsider the judgments that we believe are the product of such biases. Since these are not cases of inference, we don’t have to worry about these cases.

The second kind of case is different. An intuitionistic logician who reasons classically for the sake of having a debate with a classicist, say, might serve as an example. Such a person could assert an instance of (IMA) without saying anything absurd. Maybe we could exclude such cases because they involve a kind of supposition. However, there are also other (b)-type cases. For example, someone might assert an instance of (IMA) and mean “deductively valid inference” by “good inference” (in the second sentence). Such a person need not assert anything absurd. After all, an inference can be good in the sense that matters for evaluating it as an inference without being deductively valid. In order to exclude such cases, we should require—although this is, admittedly, vague—that the standard of goodness appealed to by the reasoner in thinking “is not a good inference” is the same as the standard by which the inference expressed by the first sentence is to be assessed—*qua* the inference that it is. That is the standard that determines whether the inference is rationally permissible or can correctly be criticized as a bad piece of reasoning. Hence, (IMP) targets instances of (IMA) such that what is meant by “good” (in speech or its equivalent in thought) in the second sentence is the goodness of acts like the one manifested in the first sentence. Given these clarifications, the absurdity of (IMA) and the truth of (IMP) seem undeniable.

Not only should (IMP) be uncontroversial, it is the kind of thing that stands in need of explanation. In particular, it seems puzzling that thinking an instance of (IMA) seems self-defeating. The thinker seems to contradict herself—or, at least, she seems to be doing

something very much like it. Such a person is irrational in the sense that her state of mind seems self-defeating or incoherent. However, we typically don't think of inferences as contentful acts or attitudes—although their constituents, i.e. premise-attitudes and conclusion-attitudes, have, of course, content. Inferences are not like beliefs or judgments in that there isn't a single content that can count as *the* content of the inference and which contradicts the belief that the inference is bad. Thus, the question arises how an inference can generate the kind of irrationality at issue in (IMP). Or, to put it differently: How can a doing that seems to have no content be in immediate rational tension with a judgment or a belief? Are we here dealing with a commitment that does not depend on any judgment or belief? If so, how does this commitment arise? Because the answers to these questions are not obvious, we want an explanation of why (IMP) is true. A good account of inference ought to help us explain the truth of (IMP). In other words, we have a novel criterion of adequacy for accounts of inference:

CoA1 An account of inference is adequate only if it can explain the truth of (IMP).

Since our ultimate aim is to give an account of what inference is, the question arises whether satisfying (IMP) is a fundamental part of what makes something an inference. I think that satisfying (IMP) is not itself immediately constitutive of being an inference but that whatever explains why (IMP) is true is a fundamental part of what makes something an inference. Note that this does not mean that there are no unconscious inferences. What it means is that if you engage in a mental act and also believe that the mental act does not live up to the rational standards governing it and you bring both, the act and the belief, to consciousness and there is no immediate rational tension between the act and the belief, then the act cannot be an act of inferring. I will come back to this below. For now it suffices to note that this is a modest and plausible idea. After all, if the idea is wrong, non-absurd instances of (IMA) must be possible, and that seems false.

2.1.2 From IMA to ‘Taking’

The Inferential Moorean Absurdity can tell us something about the nature of inference. Perhaps most importantly, it entails a version of TAKE, provided we understand “taking” in the following way:

Definition 2.1. *take**: Subject *S* takes* it that *P* just in case adding disbelief in *P*, or suspension of judgment regarding *P*, to *S*’s stock of attitudes (leaving all else unchanged) would be transparently irrational from *S*’s own perspective.

According to this definition, believing that *P* is one way of taking* it that *P* but it need not be the only way. I will suggest below that there are other ways of taking* one’s inference to be good. I use the asterisk to mark that this is a regimented use of “to take” and does not answer the question what the ‘taking’ we are interested in actually consists in. I will address that question in subsequent chapters.

With this notion of “to take*” in hand, we have an argument for a version of TAKE. After all, if (IMP) holds, then it is transparently irrational to deny, and even to suspend judgment on, the goodness of one’s inference when making it. But that is just what it means to take* one’s inference to be good in the foregoing sense. Hence, a version of TAKE holds.⁴ Since the truth of this version of TAKE seems to be an immediate consequence of the nature of inference, every account of inference should be able to explain it. This confirms our criterion CoA1 from the previous section.

The notion of “to take*” is, admittedly, a rather weak notion of taking something to be the case. Hence, the version of TAKE it supports is correspondingly weak. At the current point in our investigation, however, this is not a problem. After all, once we know that some version of TAKE must hold, we can ask what the strongest correct version of this principle looks like. Right now all we can say is that there must be something that makes disbelief

⁴ Declan Smithies (2012) has presented an interesting, related argument for access internalism about justification. Smithies holds that his argument suggests that facts about justification supervene on facts about the subject’s consciousness. In contrast to Smithies, I am interested in inference.

Notice that even if all facts about the cogency of inferences can be known *a priori* and it is a failure of rationality to be in error about them as, e.g., Smithies and Titelbaum claim, this does not mean that these facts are transparent or obvious to the subject. Thus, what Mike Titelbaum (2015) calls the “Fixed Point Thesis” about rationality does not undermine what I say in the text. This will become clearer below.

and suspension of judgment regarding the goodness of one's own inferences transparently irrational from one's own perspective. If you are making an inference, your mind must be such that such disbelief or suspension would be transparently irrational from your perspective. And whatever this "posture of the mind" turns out to be, it can appropriately be called a "taking your inference to be good." After all, there must be something real and accessible from the first person perspective that is in rational tension with the disbelief and suspension. Otherwise, the transparency of the irrationality that results from adding the disbelief or suspension would be a mystery.

I will leave the issue at that for now and return to potential worries about this line of thought in Section 2.3 below. Before I move on to what the Inferential Moorean Absurdity can teach us about some extant accounts of inference, I want to turn to the question what we take to be the case when we take our inferences to be good. An easy but also somewhat misleading way to get at this issue is to ask what the content of this 'taking' is.

2.1.3 What Is the Content of the Commitment?

It will become clear in subsequent chapters that I don't think of the 'taking' at issue as a propositional attitude. In fact, this 'taking' is contentful only in a rather special sense, which will be the topic of further discussion below. So from my perspective it is at best misleading to ask what the content of the 'taking' is. However, the 'taking' in question clearly commits the reasoner to the truth of certain propositions. So we can ask which propositions these are. What is the content of the commitment a reasoner undertakes in virtue of making an inference?

So far I have used the phrase "to take one's inference to be good" to ascribe the thing that explains the truth of (IMP), and I will continue to do so. In order to see that there is a potential problem lurking beneath the surface of the phrase, it is helpful to realize that there is actually an ongoing disagreement among advocates of the idea behind TAKE regarding what is 'taken' to be the case. Boghossian (2014) thinks that the content of a 'taking' is that the premises support the conclusion; others hold that the content is that the conclusion follows from the premises (Valaris, 2014; Broome, 2009) or that believing the premises gives

one doxastic justification for believing the conclusion (Neta, 2013). Audi (1993) holds that the ‘taking’ can be a *de re* belief about a supporting relation that it holds between the premises and the conclusion. And recently it has even been suggested that the content involves Grice’s notion of *natural meaning* (Nes, 2016).

There is, of course, an ongoing debate regarding what kind of relation or relations underwrites good inference. Is it some kind of formal entailment relation? Is it the relation of making the conclusion probable (to a certain degree)? Is there some primitive reason-giving-relation that underwrites good inferences? Is it a relation between propositions or a relation between mental states?

We can sidestep this debate to a certain degree because we can say that whatever makes good inferences good, if you make an inference, you are committed to the inference having this good-making feature. Even after we made this move, however, there are two important things to notice.

First, we don’t need to think that there is a single standard of goodness for all inferences. Different kinds of inference may be governed by different standards of assessment. In order to see this, suppose someone makes the following inference.

GCI Goldbach’s Conjecture holds for every integer that we have looked at, and we have looked at all of them up though 4×10^{18} . So Goldbach’s Conjecture is true.

If someone expresses this bit of reasoning, one wants to object: “That is a bad inference. Just because the claim holds for all integers we looked at doesn’t mean that it holds for all integers.” Now suppose the person who reasons as in GCI replies by saying, “Well, I didn’t mean it as the kind of inference that you usually find in math; I meant it as the kind of inference you find in empirical disciplines when people infer generalizations from finitely many observations.” At this point, we might insist that the conclusion should then be something like “Goldbach’s Conjecture is probably true” or something the like. However, this would not only be nit-picky, it is also hard to see how, if we go down that route, we could avoid the conclusion that we must qualify all conclusions arrived at in the empirical sciences in this way. At this point, skepticism will rear its head. The most plausible solution to this, it seems to me, is to say that there are different kinds of inference that are governed by

different norms. If that is right, the proposition to the truth of which the ‘taking’ commits the reasoner should involve the norms that are appropriate to the kind of inference the reasoner is making.⁵

This fact can be used to learn something about kinds of inference. If you want to know whether a certain class of inferences forms a special kind of inference, try to find some norm, ν , such that “ A ; therefore B . But this inference does not conform to norm ν ” is absurd for all and only the inferences in the class under consideration. If you can find such a norm, a good case can be made for the claim that the class of inferences under consideration forms a special kind of inference. In other words, kinds of inference can be individuated by the norms that govern them.

Second, that a certain relation holds between contents is not sufficient for the goodness of an inference.⁶ When one makes an inference, one can appropriately be criticized by someone who says that, although, say, the relevant consequence relation holds between one’s premises and one’s conclusion, the inference is lacking in other respects. It would be irrational to agree with such a critic while standing by the inference. Here is an example that illustrates the point: Many philosophers think that Moore’s inference from “Here is a hand” to “The external world exists” is not a good inference although the conclusion follows from the premise. It seems to many that the inference is in some sense question-begging; and some say that in this case the warrant for the premise does not transmit to the conclusion. Now, it would be absurd for Moore to think, “Here is a hand; therefore, the external world exists. But this inference is question-begging.” Hence, the proposition(s) to which the ‘taking’ commits the reasoner cannot just be about entailment relations among contents. The proposition must be incompatible with “This inference is question-begging” and the like.

As we will see below, the norms that govern inferences are multifaceted, in the sense that many things can go wrong, rationally speaking, in making an inference. Being question-begging is one of the things that can go wrong. The proposition to which the reasoner is committed in virtue of making the inference is that the inference does not go wrong in any of the ways in which it could go wrong, rationally speaking.

⁵ Boghossian (2014) makes a similar point. He thinks it lends support to TAKE. My point is less ambitious: differences in normative standards must be reflected in differences in the ‘contents’ of the ‘takings.’

⁶ Jim Pryor argues for this in an unpublished manuscript entitled, “Deliberating, concluding, entailing.”

I keep using the qualification “rationally speaking” because there are ways in which an inference can go wrong that are not incompatible with the truth of the proposition to which the reasoner is committed in virtue of making the inference. It can happen, for example, that making a certain inference is imprudent because the reasoner has better things to do right now. The proposition to which the reasoner is committed does not entail that the reasoner has nothing better to do right now. This comes out in the fact that it is not absurd to think something along the following lines, “*A*; therefore, *B*. But it is silly to make this inference now that I have so many better things to do.” When the reasoner should better not make an inference because she has better things to do and similar cases, we might call the inference “pragmatically inappropriate.” Pragmatic appropriateness is a standard that can be used to assess inferences. However, this standard does not show up in the ‘taking’ involved in making the inference. This is as it should be. After all, we probably wouldn’t want to call pragmatic appropriateness a norm of inference *qua* inference.

To sum up, the proposition to the truth of which the ‘taking’ commits the reasoner is that the inference the reasoner is making lives up to the standards that govern the inference *qua* the kind of inference it is. This allows for different standards governing different kinds of inference and it excludes standards like pragmatic appropriateness from being relevant.

We now have a rough picture before us of what the Inferential Moorean Absurdity is and how it supports the claim that in order to make an inference, you must ‘take’ your inference to be good. Moreover, I have offered some clarification regarding what you thereby ‘take’ to be the case. We are now ready to put the Inferential Moorean Phenomenon to work in thinking about inference. Thus, we now turn to a discussion of some extant accounts of inference. In this discussion, I am going to use the Inferential Moorean Phenomenon to argue against these alternative accounts.

2.2 SOME ALTERNATIVES REJECTED

In order to appreciate the significance of (IMP), it is best to see it at work. Even philosophers who accept the idea that inference requires the reasoner to ‘take’ her inference to be good

are prone to make mistakes if their reflection is not guided by an insight into the Inferential Moorean Phenomenon. In this section, I want to illustrate some such mistakes by discussing some recent accounts of inference due to Paul Boghossian, Crispin Wright, John Broome and others. Much of the discussion between Boghossian, Wright, and Broome focuses on Boghossian’s Taking Condition. Recall that Boghossian says:

(Taking Condition) Inferring necessarily involves the thinker taking his premises to support his conclusion and drawing his conclusion because of that fact. (Boghossian, 2014, sec. 3)

Boghossian thinks that this condition is not only true but must be accommodated by every adequate account of inferring. Broome holds that while the Taking Condition is true, explaining it is not a desideratum for accounts of inferring. Wright rejects the Taking Condition as false. However, all three focus on the Taking Condition without thinking about what I call the “Inferential Moorean Phenomenon.” I will bring out that this leads to various problems.

Two mistakes are particularly easy to make if one does not focus on the phenomenon motivating the Taking Condition. The first mistake is to come up with an account that can accommodate the (letter of the) Taking Condition (on one of its construals) but that cannot explain how ‘takings’ can generate the kind of irrationality exhibited by someone who thinks an instance of (IMA). The second kind of mistake is to find other instances of the puzzling phenomenon and to subsume inferring under a class of those other instances. Such a maneuver will merely move the bump in the rug. We will see examples of both kinds of mistake in what follows.

The natural first opponent for a view on which a thinker must ‘take’ her own inferences to be good is, of course, a view on which this fails. So let’s begin with a view that rejects the Taking Condition, namely a view suggested by Crispin Wright.

2.2.1 Wright’s Account

In his comments on Boghossian’s view, Wright rejects the Taking Condition for inference. He says that if the Taking Condition holds, there are only two possible cases: Either the inferring agent ‘takes’ a general form of inference to be good; and in this case the agent has

to universally instantiate this general form, thus drawing an inference. Or the agent takes a particular inference to be good; and in this case the agent has to arrive at that ‘taking’ via an inference. For our inferential abilities are productive, in the sense that we can draw an open-ended variety of inferences of the same general form. According to Wright, this productivity can only be explained by the acceptance of a general inference pattern (or that such a general pattern is somehow encoded in us), on which we have to draw in order to arrive at a ‘taking-to-be-a-good-inference’ of a particular inference. In either case, a vicious regress ensues because in both cases arriving at the ‘taking,’ which the Taking Condition demands, requires another inference. According to Wright, such a regress can only be avoided by accepting that there is a movement of thought that is not subject to anything like the Taking Condition.

[T]here is no sound motive for insisting on the Taking Condition in the first place. We can, if we like, reserve the term, ‘inference,’ for operations that comply with it, in some form. But we know that, at some level, our thinking must involve movements from and to information bearing states that are, or so we hope, appropriate to the information those states carry but are not policed by any form of ‘taking it that’ they are so appropriate. And now there is no good reason to deny that some of the moves we call ‘inference’ [...] are of this kind. (Wright, 2014, sec. 2)

Thus, Wright suggests that we ought to reject the Taking Condition. What is Wright’s positive account of inferring? According to Wright, someone infers P from Q if she accepts Q , moves to P , and does so for the reason that she accepts Q (Wright, 2014, sec. 3). Wright leaves the notion of “acting for a reason” unanalyzed. What he has in mind, though, is clearly the notion that is used in the explanation of intentional action.

I think that exactly there is where the real problem lies: to understand what it is to act on certain specific reasons and no others. Inference is, at bottom, just a special case of that and I have no further account or analysis of it to offer here. (Wright, 2014, sec. 3)

Wright wants to draw important consequences from his comparison between acting for reasons and inferring.

[Inference] no more requires control by states that register the sufficiency of the relevant reasons than action in general requires the presence, in the practical syllogism that rationalises it, of a state of the agent registering the sufficiency of the reasons supplied by his relevant beliefs and desires. (Wright, 2014, sec. 3)

The trouble with Wright's view is that it makes a mystery out of the truth of (IMP). I can see only one way for Wright to explain the truth of (IMP); he would have to say that it is explained by the fact that it is transparently irrational to act for a reason one believes to be bad. That seems correct. After all, weak-willed action is irrational and transparently so from the perspective of the agent. The obvious problem with this response, however, is that it simply assumes an analog of (IMP) for acting-for-a-reason. Given that, according to Wright, acting for a reason is not subject to an analog of the Taking Condition and he has no explanation for an analog of (IMP) in the practical case, it is unclear why it is transparently irrational to act for a reason one believes to be bad.

Wright trades the requirement to explain (IMP) in the theoretical case for the requirement to explain an analog of (IMP) for the practical case. But he never gives us the required explanation. Moreover, Wright does not tell us what it is to act for a reason. Hence, the proposal I made on Wright's behalf simply relocates the problem and, then, stipulates that it is solved. However, there does not seem to be any other explanation of (IMP) available to Wright.

Maybe Wright could extend his account by offering an analysis of "acting for a reason" that would explain the truth of the practical analog of (IMP) and, thereby, explain the theoretical version of (IMP). In the absence of such an extension, however, we simply have to note that Wright's account (as it stands) cannot explain the truth of (IMP). It thus fails the criterion of adequacy [CoA1](#) above.

Once we realize that we cannot simply deny TAKE and similar conditions, such as Boghossian's Taking Condition, we may be tempted to take the other extreme position and claim that the thinker must believe that her inference is good. A discussion of such views will have to wait, however, until the next chapter. In the remainder of this chapter, I shall discuss views on which there is something right about the Taking Condition but the 'taking' at issue is not a belief.

2.2.2 Boghossian's Account

Boghossian holds that inferring is a matter of following a rule. He thinks that we should understand the Taking Condition as requiring that the agent applies a rule (of reasoning) she accepts, and that this rule licenses the inference.

[W]e are trying to explain what it is for a thinker to take (1) [i.e. “It rained last night”] and (2) [i.e. “If it rained last night, then the streets are wet”] to justify (3) [i.e. “The streets are wet”]. And our idea is that this taking can be understood as a matter of the thinker applying a rule that he accepts, Modus Ponens, to the contents (1) and (2), deriving from them the conclusion (3) and so coming to believe it. (Boghossian, 2014, sec. 11)

Boghossian thinks that this proposal can accommodate the Taking Condition because if someone follows the rule to do φ in circumstance C , she ‘takes’ C to be a reason to do φ , i.e. the agent is treating the obtaining of C as a reason to do φ . Applied to inferring, this means that if someone follows a rule in making the inference from P to Q , she takes P to be a reason to believe Q . Moreover, such a person believes Q because of this. Hence, understanding inferring as involving following a rule seems to be able to accommodate the Taking Condition.

There is, of course, a potential problem with this proposal. It seems that, in order to follow a rule, one has to go through a bit of reasoning of roughly the following form: (i) The rule says: do φ in circumstance C . (ii) I am in circumstance C . (iii) Therefore, I shall do φ . Thus, a regress ensues: In order to draw an inference, one has to follow a rule; and, in order to follow a rule, one first has to draw an inference (see Boghossian, 2014, sec. 10).

One might hope to evade this problem by adopting a conception of rule-following according to which rule-following can be analyzed in terms of dispositions. Against this proposal, Boghossian argues that no dispositional account can accommodate the Taking Condition because ‘taking’ something to be the case must be more than the mere manifestation of a disposition. Another suggestion for rescuing the rule-following account of inferring would be to think of the reasoning that brings one from the representation of the rule to its application as a sub-personal piece of “reasoning.” Boghossian objects that if conclusions just pop up in our mind (as the result of a sub-personal process), rationality requires that we ask ourselves whether we really ought to endorse these conclusions. And to answer this question we have

to become aware (at the person-level) of the inference drawn in following the rule. Thus, we are again launched on an infinite regress.

According to Boghossian, the lesson to learn from all this is that we should take the notion of *following a rule* to be a primitive notion—or else we have to give up our ordinary notion of person-level reasoning.

[W]e face a stark choice between attempting to account for our mental lives without something that looks like the traditional notion of person-level reasoning, on the one hand, and being willing to take the notion of following a rule as an unanalyzable primitive, on the other. (Boghossian, 2014, sec. 14)

Given this account, how can Boghossian explain the truth of (IMP)? He has to assume that it is irrational—and transparently so from the reasoner’s own perspective—to follow a rule (of reasoning) in a way one believes to be incorrect (or to follow a rule one believes to be incorrect). This assumption certainly seems to be true, but it does not seem to state a fundamental fact. Given that Boghossian takes the notion of rule-following to be primitive, he cannot argue for this assumption or explain why it is true; he has to accept it as a primitive fact. What is more, this assumption is just an analog of (IMP) for rule-following. Hence, it cannot solve the puzzle how a contentless doing can generate what looks like an inconsistency. Moreover, the rule-following analog of (IMP) calls for an explanation just as much as (IMP) itself. So Boghossian relocates the puzzle without solving it.

The situation is especially troubling for Boghossian because if one wants to explain (IMP) by appeal to the Taking Condition, it seems plausible that the best explanation for the rule-following analog of (IMP) is that rule-following is subject to an analog of the Taking Condition. However, Boghossian cannot accept that rule-following is subject to an analog of the Taking Condition. This would lead to a regress. It would imply that, in order to follow a rule, one has to follow another rule. After all, that is what ‘taking’ consists in, according to Boghossian.

Furthermore, Boghossian makes not only the second mistake I mentioned above. Even if we grant Boghossian the assumption about primitive rule-following analogs of (IMP), it is not clear that his proposal can explain the truth of the original (IMP). After all, Boghossian does not tell us what the ‘taking-to-be-a-reason’ that is involved in rule-following actually is. In particular, it is unclear why following the rule “In C , do φ ” is in immediate rational

tension with the belief that being in C is not a reason to do φ . Is there some contentful attitude here that is subject to consistency constraints and that has the content that C is a reason to do φ (or something that implies this)? If so, what kind of attitude is this? After all, Boghossian clearly rejects the idea that the ‘taking’ is a belief. But if there is no such attitude, what explains the immediate rational tension? Perhaps Boghossian could go beyond the account he has offered and thus explain the rational tension. But it is hard to see how he can do that while holding on to the view that rule-following is primitive. And in any event, he has not given us such an explanation. So Boghossian’s account does not meet the criterion of adequacy [CoA1](#) above.

2.2.3 Accounts on Which the ‘Taking’ Is an Intuition

I have devoted two separate subsections to Boghossian’s and Wright’s views. I now want to turn to a whole family of views, namely views according to which the ‘taking’ one must enjoy in order to make an inference is an intuition. This view naturally suggests itself. After all, when you make an inference, you can ‘see’ how the conclusion and the premises hang together.

John Broome, for example, advocates a version of this view. Like Boghossian, Broome holds that to draw an inference is to follow a rule of reasoning. However, he offers a dispositional analysis of rule-following. According to Broome, the disposition you must manifest in order to follow a rule is a

[...] disposition to act in a particular way and for that way of acting to seem right to you. I believe that acting in accordance with a disposition of this more complex sort constitutes following a rule. [...] It is seeming right that distinguishes following a rule from mere causation. ([Broome, 2014a](#), sec. 1)

Broome thinks of seeming right as a two-place relation; something seems right relative to a rule (or a standard). He defines following a rule as “acting in accordance with a simple disposition to act in a particular way and for your act to seem right relative to the rule” ([Broome, 2014a](#), sec. 2). The rule one follows is encoded in one’s “settled dispositions.” Those are dispositions to act in such a way that “were you to check several times, the act would generally seem right relative to the rule” ([Broome, 2014a](#), sec. 2).

In this way, Broome arrives at an account of reasoning on which reasoning is an act of constructing a conclusion by operating on contents according to a rule.

Briefly, my account of reasoning is this: you operate on the contents of your premise-beliefs, following a rule, to construct a conclusion [...]. The rule *guides* you and you actively follow it. [...] When you are guided by a rule, what you do seems to you correct relative to the rule or, if it does not, you are disposed to correct yourself. (Broome, 2014b, p. 624–25)⁷

Broome claims that this proposal can accommodate Boghossian’s Taking Condition. For if an inference seems right to someone who is disposed to believe the conclusion given that she believes the premises, it is natural to say that the person takes her premises to support her conclusion.

You may not consciously believe that the premises support the conclusion. Even so, we may treat your disposition to believe the conclusion when you believe the premises, and for this to seem right, as itself implicitly taking the premises to support the conclusion. Since you believe the conclusion because of your disposition, you believe it because you take the premises to support the conclusion. So you satisfy Boghossian’s taking condition. (Broome, 2014a, sec. 3)

Broome is not alone in holding a view of this general shape. Sinan Dogramaci, for example, expresses a different version of the view when he explains why he is able to infer “Dolphins are born live” from “Dolphins are mammals” and “All mammals are born live”:

I have a conditional intuition that dolphins are born live, which is generated by my belief that dolphins are mammals and all mammals are born live. I might self-attribute this conditional intuition by saying, ‘It seems to me, in the light of my beliefs that dolphins are mammals and mammals are born live, that dolphins are born live.’ This does not involve my bearing any recognition relation to a consequence relation between propositions. (Dogramaci, 2013, p. 394)

Such views suggest that the correct version of the Taking Condition requires that the inferring subject has an intuition whose content is appropriately related to the (apparent) goodness of the inference. The reasoner may, e.g., have an “intellectual seeming” that her inference is good, i.e., “a phenomenal, attentional sense of the truth of” this proposition, where such seemings “are not beliefs and [...] do not entail forming beliefs” (Audi, 2015, p. 61; see also Chudnoff, 2014).

⁷ I don’t know what it means to “operate on contents” and the whole idea seems suspect to me. My criticism, however, will not turn on that.

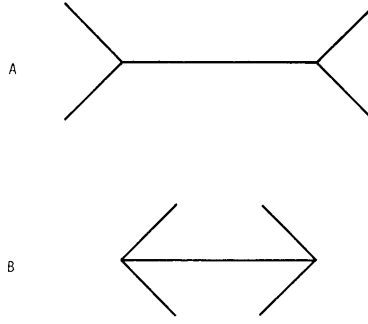


Figure 1: Müller-Lyer illusion

Recall, however, that the correct version of the Taking Condition must explain the Inferential Moorean Absurdity. That is, the Taking Condition should explain why it is transparently irrational, from the subject’s own perspective, to make an inference she believes to be bad. That is the upshot of the criterion of adequacy [CoA1](#). Unfortunately, intuitions are ill-suited to explain the irrationality mentioned in IMA. The problem is that even if intuitions or ‘seemings’ have some rational force, that force is defeasible. It is not always irrational to form beliefs at odds with one’s intuitions. By contrast it is *always* irrational to believe one’s inference to be bad while making it.

To see why it’s not always irrational to form beliefs at odds with one’s intuitions, consider the Müller-Lyer illusion (Figure 1).

If you look at the Müller-Lyer illusion, it seems to you that the top line is longer than the bottom line, i.e., you have an intuition with that content. This intuition is not an *intellectual* seeming, but it shares all features of intellectual intuitions that are relevant here.⁸ Notice that if you know that you are looking at the Müller-Lyer illusion, it is not irrational—let alone absurd—to believe that the lines are of equal length. In general, it can seem that P as robustly as one likes, but that cannot *on its own* suffice to make believing *not-P* or suspending judgment on whether P irrational. Therefore, the idea that inferring requires an

⁸ To see this you can use the fact that there seem to be more integers than even integers instead of the Müller-Lyer illusion; the argument goes through unchanged.

intuition or seeming cannot explain the truth of (IMP).⁹ Hence, the ‘taking’ we are interested in is not an intuition. Put differently, the view that the ‘takings’ at issue are intuitions does not meet our first criterion of adequacy [CoA1](#) above, because it cannot acknowledge that the ‘taking’ always commits the reasoner to the goodness of her inference.

Before moving on, I want to consider two potential objections. First, an opponent might say that believing that your inference is not good while intuiting that it is good is transparently irrational from your own perspective, unless you have countervailing evidence. This response, however, is unsatisfying. To see this, notice that philosophers who think that intuitions are distinct from beliefs frequently use the fact that intuiting that P is not in immediate rational tension with the belief that *not-P* in order to argue for their view ([Koksvik, 2011](#), sec. 2.5). Elijah Chudnoff puts the point thus:

If x knows that *not-p* and has an intuition experience representing that p , x is not thereby open to criticism; but if x knows that *not-p* and also judges or forms an inclination to judge that p , x is thereby open to criticism. ([Chudnoff, 2013](#), p. 44)

In order to explain IMA, the ‘taking’ must be precisely such that if you judge (and perhaps even know) that your inference is not good you are thereby open to criticism—because you ‘take’ it to be good, which, on the current proposal, means “because you intuit it to be good.” So the ‘taking’ must have the very feature that friends of *sui generis* intuitions use to distinguish intuitions from beliefs (and inclinations to believe). Conversely, if the ‘taking’ were an intuition in Chudnoff’s sense, this intuition and the belief that the inference is not good shouldn’t be in rational tension with each other when you have evidence that defeats the intuition. But that is false. Even in such a case, you are not merely making an inference that is bad; you are doing something absurd.

Second, Broome might object that I have only considered his appeal to a seeming and haven’t given due consideration to the idea about complex dispositions. Can Broome’s account be saved by appealing to the dispositions to believe the conclusion when one believes the premises and to correct oneself if the inference does not seem right? Notice that it is not true in general that if someone has a disposition to ψ in C , it is transparently irrational for

⁹ This leaves open the possibility that there is something, call it a “rational insight,” that is very much like an intuition but commits the subject to its content (in a way that is transparent to the subject). A version of this view might be compatible with the view I shall put forward below, but I think this terminology is misleading.

the person to believe that the transition from the stimulus condition to the manifestation of the disposition is bad, or unwarranted, or in some other way defective. We all have dispositions we disapprove of; and this does not necessarily make us irrational, especially if the dispositions in question are not dispositions to perform intentional actions. Moreover, it does not help to combine the two elements, i.e. seeming and act-disposition, in a single disposition. I might have a disposition to sigh (unintentionally)—for example, when I am depressed—and for this to seem right to me. This does not make it transparently irrational for me to believe that sighing is not the right thing to do. Hence, while Broome’s account may or may not be able to accommodate the Taking Condition, his account cannot explain why (IMP) is true.

To sum up, the idea that the ‘takings’ involved in inference are intuitions cannot account for the rational strength of ‘taking’; it cannot acknowledge that ‘taking’ one’s inference to be good always commits the reasoner to the goodness of her inference.

In the last three subsections, we have seen the Inferential Moorean Phenomenon in action. Acknowledging that the correct account of inference must explain this phenomenon suffices to rule out a good number of extant accounts of inference. In my discussion, I have relied on TAKE, (IMP) and CoA1. The fact that these three principles are powerful enough to rule out a good many alternative views will no doubt raise the question whether they are correct and really support the results I have reached. So let us turn to some potential objections.

2.3 OBJECTIONS, FIRST ROUND

As already intimated at the beginning of this chapter, two standard objections to the idea that if you make an inference, you ‘take’ your inference to be good are the following:

1. Sophistication Objection: the idea implies that animals and young children cannot make inferences, but this is obviously false ([Winters, 1983](#); [McHugh and Way, 2016](#)).
2. Regress Objection: the idea gives rise to vicious regresses ([Wright, 2014](#); [Setiya, 2013](#)), which are typically seen as related to Lewis Carroll’s (1895) fable of Achilles and the tortoise.

I cannot do full justice to these objections at this point. In order to do that, I will need the resources of the positive view that will emerge in later chapters.¹⁰ However, I want to give some room to critical voices already at this stage. This is partly because it will help to orient the discussion below and to clarify my arguments and partly because I want to react to some parts of the criticism already at this point.

Conor McHugh and Jonathan Way (2016) have recently launched an attack on the idea that inference requires ‘taking’ one’s inference to be good, which is partly motivated by their disagreement with earlier expressions of my view (as well as Boghossian’s, Valaris’s and similar views). This makes McHugh’s and Way’s criticism particularly helpful in the current context. Thus, I shall begin by laying out their objections. After offering some replies, I will turn to a version of the Sophistication Objection that targets (IMP) in particular. And I will end by looking at a potential objection based on recent discussions about the normativity of rationality.

2.3.1 The Critique of McHugh and Way

McHugh and Way (2016, sec. 1–2) begin their critique by distinguishing different theses in the neighborhood of Boghossian’s Taking Condition. Here they are:

- (Taking Condition) Inferring necessarily involves the thinker taking his premises to support his conclusion and drawing his conclusion because of that fact.
- (Consequence Condition) Inferring q from p entails taking p to support q .
- (Commitment Condition) Inferring q from p commits you to taking p to support q .
- (Negative Condition) Inferring q from p entails not taking p not to support q .

They reject the Taking Condition and the Consequence Condition but they end up endorsing a version of the Commitment Condition. They stay agnostic regarding the Negative Condition. Thus, a crucial question is whether the latter two conditions can do all the explanatory work that needs to be done. I think they cannot; McHugh and Way think they can.

¹⁰ I will deal with the Sophistication Objection in Section 4.6, and I will address the Regress Objection in Chapter 5.

McHugh and Way go on to list three problems for the Taking Condition and the Consequence Condition, and they discuss each problem for two kinds of view, those on which ‘takings’ are beliefs and those on which ‘takings’ are intuitions (or something similar). The three problems are:

(A) Overintellectualisation

The worry is that creatures who can clearly make inferences don’t have the conceptual resources to ‘take’ their inferences to be good.

(B) Where does the ‘taking’ come from?

It seems that the ‘taking’ must be rational in order for the inference to be rational. The worry is that the only way for these ‘takings’ to be rational is for them to be the results of inferences. This launches us on a vicious regress.

(C) What does the ‘taking’ do?

The worry is that “it’s not clear how a ‘taking’ [...] is supposed to get you to draw your conclusion, if not by providing an extra premise or being involved in some additional reasoning” (McHugh and Way, 2016, sec. 3).

McHugh and Way think that these problems provide excellent *prima facie* reasons to reject conditions like the Taking Condition and the Consequence Condition. They go on to consider six arguments for the Taking Condition and find all of them wanting. They conclude that the *prima facie* reasons still stand and that we, thus, should reject the Taking Condition and Consequence Condition. The six arguments they consider are—in my formulation—the following:

1. The Taking Condition is needed to explain what is wrong with invalid inferences.
2. Moorean Arguments, here they discuss the presentation of the argument above that occurs in (Hlobil, 2014).
3. The Taking Condition is needed to solve the problem of deviant causal chains.
4. The Taking Condition is required to vindicate the idea that reasoning is an exercise of agency.
5. The Taking Condition is needed to distinguish deductive and inductive reasoning.

6. The Taking Condition is required to explain why it is humanly impossible to draw certain inferences, e.g., the inference from the Peano Axioms to Fermat’s Last Theorem (in one step).

McHugh and Way think that in none of these cases, we need something as strong and problematic as the Taking Condition or the Consequence Condition in order to explain the phenomenon at issue. By contrast, I think there is at least a kernel of truth in each of these arguments except the first one. Since this chapter is on the Inferential Moorean Absurdity, however, I will focus on the second argument they discuss.

2.3.2 Why Think That the Commitment Arises From a ‘Taking’?

Let’s look a bit more closely at what McHugh and Way say about my argument. They consider a view on which the ‘taking’ at issue is a belief and they call the state of mind expressed by instances of (IMA) “inferential akrasia.” Their objection is worth quoting at length.

Suppose inferential akrasia is not impossible but just highly irrational. Again, the Taking Condition offers a potential explanation: Inferring q from p entails believing that p supports q . But someone who believes that p supports q and believes that p does not support q has contradictory beliefs. And it is highly irrational to have contradictory beliefs.

Again, this only requires the Consequence Condition, and again it is not the best explanation in any case. Having contradictory beliefs is not the only way to be highly irrational. Inferential akrasia looks like a plain example of high irrationality, insofar as it amounts to going severely wrong by your own lights. It might thus be taken as a further basic form of irrationality, or it might be taken to fall under the rational constraint against akrasia. Alternatively, if inference essentially aims at leading to true beliefs (McHugh and Way ms), inferential akrasia might fall under the rational constraint against taking what you acknowledge to be unreliable means to your ends. We don’t need to assume that it also involves contradictory beliefs in order to hold that this is irrational.

A more general reason to doubt that the Taking Condition offers the best explanation of either the impossibility or irrationality of inferential akrasia turns on the parallel between inferential akrasia and doxastic akrasia: believing p while believing that there is no reason to believe p . Doxastic akrasia would also be highly irrational and may even be impossible (cf. Streumer 2013, 196–7). But the explanation of this is surely not that believing p entails believing there is reason to believe p . This explanation immediately sets off an infinite regress.

So the Taking Condition is not needed to explain the Inferential Moorean Phenomenon, as characterised by Hlobil. (McHugh and Way, 2016, sec. 4.2)

Let's begin by focusing on the first part of their objection, i.e., the claim that the Consequence Condition does not offer the best explanation. It is not entirely clear whether McHugh and Way want to offer a better explanation of the irrationality mentioned in (IMP) or whether they want to endorse the view that this irrationality is basic or primitive.

If they want to do the latter, it is unclear why they say that the Consequence Condition does not offer the best explanation. They should rather say that no explanation is needed in the first place. Now, the irrationality of thinking instances of (IMA), as it were, “stares us in the face.” This is no reason, however, to think that no explanation is needed. It is a crucial part of the explanandum. After all, there are kinds of irrationality that are not so transparent to us, e.g., the irrationality of having intransitive preferences. Having intransitive preferences is irrational (let's suppose) but it is not absurd, i.e. obviously or transparently irrational from the subject's own perspective. Even if we think that it is simply a basic fact about rationality that thinking instances of (IMA) is irrational, there should be an explanation of why this irrationality is transparent and thus differs from the kind of irrationality present, e.g., in intransitive preferences. So we cannot explain everything that needs to be explained by saying that the irrationality of inferential akrasia is basic.

Moreover, the Inferential Moorean Phenomenon is a species of the genus of which I will give a general characterization below, in Section 2.4. Quite generally, manifestations of rational capacities are in immediate rational tension with the belief that they don't live up to the norms that govern them. Phenomena of this general kind occur in a systematic and predictable way. Hence, we should have a unified account of these phenomena. But holding that all these irrationalities are basic doesn't give us a unified account. The case of inference is particularly puzzling because it can seem like a mere content-sensitive transition between attitudes, and it is not clear how a unified account can cover such a case. Hence, saying that the irrationality mentioned in (IMP) is basic is at best a last resort.

Let us assume, then, that McHugh and Way want to offer a better explanation. In this case, they cannot take it for granted that inferential akrasia is “a plain example of high irrationality.” I am not denying this, of course, but it is the thing that we want to explain. What is their account? As far as I can see, they offer three alternative explanations. First, inferential akrasia is irrational because “it amounts to going severely wrong by your own

lights.” Second, it is irrational because it falls “under rational constraints against akrasia.” Third, it falls “under the rational constraint against taking what you acknowledge to be unreliable means to your ends.” Let’s look at the three explanations in turn.

If the first explanation is better than the one offered by the Consequence Condition, it must be transparently irrational to go severely wrong by your own lights. Now, I am going severely wrong by my own lights if I stumble and fall down the stairs. This does not mean, however, that my stumbling is transparently irrational. To this one might say that stumbling is not the kind of thing that can be rational or irrational (unless it is an intentional action). In the first instance, only exercises of rational capacities can be assessed for their rationality.¹¹ This raises the question whether conditions like the Consequence Condition and its analogs for other acts point to something that plays a crucial role in constituting something as the exercise of a rational capacity. As will become clear in later chapters, I think that these conditions indeed point to something that we must understand in order to understand what it is to exercise a rational capacity. If that is correct, McHugh and Way’s first explanation tacitly relies on something that we first have to uncover with the help of the Consequence Condition. The explanation only works if we know what exercises of rational capacities are, but to know this we must have already explained the irrationality mentioned in (IMP). In order to avoid this problem, McHugh and Way would have to give us an account of rational capacities that doesn’t involve the idea that exercises of rational capacities are partly constituted by an endorsement of themselves as living up to the norms that govern them.

In any event, the fact that it is transparently irrational to go severely wrong by your own lights seems too close to the original explanandum. Just like Boghossian’s explanation in terms of rule-following and the explanation I have put into Wright’s mouth in terms of acting-for-reasons, the explanation of (IMP) by saying that going wrong by one’s own lights is irrational merely moves the bump in the rug. What we ultimately what to know is how there can be a transparent rational clash between a doing and a belief. Why are my beliefs, intentions, and inferences not like my falling down the stairs in that its occurrence can be

¹¹ Here I am ignoring complications that have to do with acts that can derivatively be called “rational” or “irrational.”

terrible by my own lights without this implying that I am irrational, even from my own perspective?

The second explanation, i.e. that the irrationality mentioned in (IMP) is explained by constraints against akrasia, does not seem much better. After all, inferring is not an intentional action that issues from practical reasoning. For if it were, practical inferences should also issue from practical reasoning. And this would launch us on a vicious regress. Nor can we infer any more at will than we can believe at will. Akrasia, however, is a phenomenon that arises for intentional action. And such actions can, at least in principle, issue from practical reasoning. Hence, it is not clear that thinking instances of (IMA) can count as cases of akrasia. Of course, one can widen one's notion of akrasia to include acts that are not intentional actions. If one does that, however, one will have to limit it to exercises of rational capacities. And now we are back at square one. We need a notion of a rational capacity and an explanation for why exercises of such capacities are subject to the kind of irrationality described in (IMP) and its analogs for other such acts. Moreover, akrasia in the case of intentional action seems to be merely one instance of this more general phenomenon. So even if inference were an intentional action, this explanation wouldn't explain the phenomenon at the appropriate level of generality.

The third explanation says that thinking an instance of (IMA) is irrational because it falls "under the rational constraint against taking what you acknowledge to be unreliable means to your ends." This is so because "inference essentially aims at leading to true beliefs." The first thing to say about this is that there are inferences that don't aim at true beliefs, e.g., inferences inside supposition contexts. I can, e.g., make inferences from what you say in order to show that absurd consequences follow from your view. The second problem with this explanation is again that it does not operate at the appropriate level of generality. We want an explanation that covers instances of (IMA) as well as cases of doxastic akrasia, akrasia in the practical domain, and ideally even akratic wishes and hopes—in other words, all exercises of rational capacities that the subject herself believes do not live up to the norms that govern such acts. Finally, notice that I might not be aware of the fact that there is a rational constraint against taking what you acknowledge to be unreliable means to your ends (I actually doubt that there is such a constraint). In this case, the irrationality explained

by such a constraint cannot be transparent to me. However, the irrationality of thinking instances of (IMA) is transparent to me. Hence, the explanation fails.

This brings me to McHugh and Way’s “more general reason” to doubt the Taking Condition. That is, the irrationality of “believing p while believing that there is no reason to believe p ” cannot be explained by an analog of the Taking Condition. At this point of our investigation, all I can say about this is that I hold that the correct explanation of this irrationality is exactly parallel to the explanation of (IMP) by TAKE. Just as inference is partly constituted by an endorsement of the inference as correct, so belief is partly constituted by an endorsement of the belief as correct, i.e. as living up to the norms that govern beliefs—and these norms include the norm that the belief must be justified (or else doxastic akrasia isn’t irrational). McHugh and Way worry that this launches us on a vicious regress. As will become clear below, the regress can be avoided if the endorsement is not a second act or attitude over and above the belief or inference itself.

2.3.3 Reasoners Who Cannot Think Instances of (IMA)

The first of McHugh and Way’s three standard objections is basically the Sophistication Objection. So far I haven’t said a lot about what the ‘taking’ we are interested in is. Hence, it is difficult for advocates of the Sophistication Objection to argue, at this point, that the ‘taking’ in question requires resources that many inferring subjects don’t possess. The opponent might, however, direct her attention at my argument and claim that my argument only works for subjects who possess sophisticated conceptual resources. An opponent might, e.g., worry that only subjects who possess the concept of a good inference can be subject to the irrationality mentioned in (IMP). It can thus seem that (IMP) cannot tell us anything about inferences of subjects who lack this concept.

Notice, however, that if such a subject makes an inference, her state of mind is thereby in direct rational tension with the view of someone who thinks that the inference is not good. It is plausible that the rational tension in the inter-subjective and in the intra-subjective case must be explained in the same way. After all, whatever makes me obviously disagree with myself in thinking an instance of (IMA) is the same as what makes me obviously disagree

with you when I make an inference that you believe to be bad. Now, if what makes me disagree with myself in thinking instances of (IMA) is that I am ‘taking’ my inferences to be good, then this should also explain the disagreement between me and you when I make an inference that you believe to be bad. This lends support to the view that even subjects who don’t possess the concept of a good inference must ‘take’ their inferences to be good.

At this point, you might think that the argument I have just given ultimately doesn’t help me but actually makes my view look worse. After all, what I just said implies that someone who does not possess the concept of a good inference can nevertheless ‘take’ her inferences to be good. But how can ‘taking’ be anything like a propositional attitude if it doesn’t draw on the conceptual resources of the subject? Doesn’t a ‘taking’ have conceptual content? I cannot answer these worries here. We will need more of the positive picture under our belt in order to do so. In order to put my cards on the table, however, I want to say that I indeed think that the ‘taking’ we are trying to understand is not a propositional attitude in any straightforward sense. It is misleading to say that ‘takings’ have contents, and enjoying them doesn’t require the conceptual resources to believe the things that may (misleadingly) be called their “contents.” To explain this now would mean to get ahead of ourselves.

2.3.4 A Disjunctive Explanation?

Another worry comes from a rather different direction. There is an ongoing debate regarding the normativity of rationality (Kolodny, 2005; Broome, 2005). One camp in this debate holds that we don’t have reasons to be rational; we merely have particular reasons that speak in favor of doing particular things. The basic form of irrationality, on this view, is that of not responding correctly to the reasons one has. All irrationality is, at bottom, of this form. Now, being inconsistent seems to be a kind of irrationality. Advocates of the “rationality isn’t normative” camp must reduce this kind of irrationality to the irrationality of not responding correctly to one’s reasons. In order to do this, advocates of the camp have developed what might be called a “disjunctive explanation” (Raz, 2005; Kolodny, 2007; Lord, 2014). For the case of inconsistent beliefs, the explanation runs roughly as follows:

EXP1 If I believe that P and that $not-P$, I cannot have responded correctly to all of my epistemic reasons. After all, I cannot have sufficient epistemic reason to believe that P and also sufficient epistemic reason to believe that $not-P$. The problem, normatively speaking, with my inconsistent beliefs is not that they are inconsistent but that I have failed to respond correctly to the reasons I have. The inconsistency of my beliefs guarantees that this must be the case, but it isn't in itself a problem, from a normative perspective.

This is relevant for my topic because it is easy to see how such an explanation can be constructed for what is wrong with thinking instances of (IMA).

EXP2 If I make an inference and also believe that the inference is not a good inference, I cannot have responded correctly to all of the reasons I have. For either the premises of the inference give me sufficient reason to believe the conclusion and I then also have sufficient reason not to believe that the inference is not good. Or I have sufficient reason to believe that the inference is not good. But in the latter case, the premises don't give me sufficient reason to believe the conclusion of the inference. And, hence, I don't respond correctly to my reasons in making the inference.

Notice that EXP2 assumes that the totality of one's reasons cannot be such that one responds correctly to them by making the inference and also believing that the inference is bad. This is actually a controversial assumption (for discussion see [Coates, 2012](#); [Weatherson, 2008](#); [Greco, 2014](#); [Horowitz, 2014](#)). But let's assume that the assumption is correct.

Could an explanation along the lines of EXP2 be sufficient to explain what is puzzling about (IMP)? If so, it seems that we don't need to assume that reasoners 'take' their inferences to be good. Well, one element that is missing from EXP2 is that thinking instances of (IMA) is transparently problematic from the perspective of the reasoning subject. After all, it can happen that doing two things guarantees that I don't respond correctly to my reasons but this is entirely opaque to me. It seems, for example, that I cannot respond correctly to my reasons when I accept the Gambler's Fallacy and also accept the axioms of the probability calculus. But I might not notice this; perhaps I think that the Gambler's

Fallacy is actually underwritten by the probability calculus. Clearly, thinking instances of (IMA) is not like that. The explanation EXP2, however, does not explain the difference between the two cases.

We may try to solve this problem with EXP2 by adding to it that everyone knows, at least implicitly, that you cannot respond correctly to your reasons in thinking an instance of (IMA). The first obvious problem with this addition is that some philosophers actually deny the thing that we now claim everyone knows (see [Coates, 2012](#); [Weatherson, 2008](#)). The second problem is that it is not clear whether we can still claim that this explanation allows us to deny that inference requires the reasoner to ‘take’ her inference to be good. After all, we now claim that everyone implicitly knows that she is responding correctly to her reasons in making an inference only if she has sufficient reason to believe that her inference is good. If someone implicitly believes that, however, and also makes an inference, it seems to me that this person should count as ‘taking’ her inference to be good—especially if the reasoner is conscious of her inference. I don’t think that this is the ‘taking’ that is actually involved in inference, but I think it should count as a ‘taking’ for the purposes of this chapter. After all, the implicit knowledge (together with the consciousness of the inference) is supposed to explain the truth of (IMP). What is more, this explanation is not convincing because it cannot explain the transparent irrationality of suspending judgment. After all, it is not transparently irrational to suspend judgment about an implication of something one merely implicitly believes. It is not transparently irrational, for example, to implicitly believe that there are more natural numbers than even natural numbers while explicitly suspending judgment on the matter. Hence, an explanation along the lines of EXP2 (after the required additions) does not undermine the arguments of this chapter.

Finally, I’d like to point out that the whole picture is implausible. If I vacillate for some time between two consistent but incompatible doxastic states without a change in my reasons, I arguably cannot be responding correctly to my reasons for half of the time. If I’m first in the correct doxastic state (given my reasons) for half of the time and then in an inconsistent doxastic state, which combines the previous two states, for half of the time, I similarly cannot be responding correctly to my reasons for half of the time. This may be a problem in its own right, but in the second case there is an additional problem: my

inconsistency. It strikes me as patently false to think that this second problem does not exist.

2.4 EXCURSION: IS THIS MOOREAN?

This subsection is an excursion and can be skipped without loss of continuity. I would like to say a few words about the sense in which the Inferential Moorean Phenomenon deserves to be called “Moorean.” Recall the schemata for the omissive and commissive versions of Moore’s Paradox (see [Hintikka, 1962](#)).

(OMI) P and it is not the case that I believe that P .

(COM) P and I believe that not- P .

The most striking difference to (IMA) is that (IMA) does not talk about mental acts or attitudes at all. No attitude verbs occur in (IMA). However, it is easy to introduce talk about one’s own mind into the formulation of (IMA). There are various ways of doing so. We can introduce talk about the act of inferring or we can introduce talk about belief or suspension.

(IMA) A ; therefore, B . And the inference from A to B is not a good inference.

(IMA_{inf}) I infer B from A . And the inference from A to B is not a good inference.

(IMA_{bel}) A ; therefore, B . And I believe that the inference from A to B is not a good inference.

(IMA_{sus}) A ; therefore, B . And I suspend judgment on whether the inference from A to B is a good inference.

(IMA_{inf-bel}) I infer B from A . And I believe that the inference from A to B is not a good inference.

As long as there is no change of mind in the middle of thinking thoughts that could be expressed like that, I think all of these five schemata express absurd thoughts. All of the cases involving talk about the mind are commissive rather than omissive. That is because in order to say whether the schema “ A ; therefore, B . But it is not the case that I believe that

the inference from A to B is a good inference” yields absurdity, we would need to decide whether the ‘taking’ we are interested in is a belief. Since I will argue below that it is not a belief, I think this schema does not yield absurdities. However, if we talk about ‘seeing-a-connection’ instead of beliefs, we can formulate an omissive version of (IMA) that seems absurd.

(IMA_{omi1}) A ; therefore, B . And it is not the case that I see any connection between A and B .

The other omissive case does not yield any absurdity:

(IMA_{omi2}) I am not inferring B from A . And the inference from A to B is a good inference.

After all, there is nothing absurd about acknowledging that there are many good inferences that you are not making. The omissive cases are much less clear cut than the commissive ones. So while some omissive cases are possible, I will focus on the commissive variants of (IMA).

Once we see that we can introduce mental vocabulary on both sides of (IMA) and still get an absurdity (in the commissive case), we are in a position to notice another striking difference between Moore’s Paradox and (IMA). It is crucial for Moore’s Paradox that one and only one of the two conjuncts talks about beliefs. After all, the following two schemata don’t yield Moorean absurdities.

(¬COM1) P and it is not the case that P .

(¬COM2) I believe that P and I believe that not- P .

These schemata correspond to (IMA) and (IMA_{inf-bel}) respectively. However, (¬COM1) is simply a contradiction and (¬COM2) is an acknowledgment of having contradictory beliefs. Hence, it doesn’t seem puzzling that asserting or thinking instances of these schemata is absurd. By contrast, the absurdity of (IMA) and (IMA_{inf-bel}) doesn’t allow for such a straightforward explanation. (IMA) does not seem to be a straightforward contradiction. Hence, (IMA_{inf-bel}) does not seem to acknowledge that the subject is having contradictory beliefs.

I think these differences between the traditional Moorean Paradox and (IMA) have their roots in the following situation: There are two ways to create statements with a commissive Moorean flavor.¹² Here are the recipes for creating them:

Moore-1 Take a sentence that expresses a mental state or act M and conjoin it with a sentence that is used to assert that the subject is not enjoying mental state or act M .

Moore-2 Take a sentence that expresses a mental state or act M and conjoin it with a sentence that is used to asserts something to the effect that the subject’s mental state or act M does not live up to the standards that govern such acts *qua* the acts they are.

Examples of the first kind are:

- (a) “Thank you. I don’t feel any gratitude at all.”
- (b) “Go Red Sox! I don’t support the Red Sox.”¹³
- (c) “Would that everyone loved the beautiful, but I don’t wish that everyone loved the beautiful.”

Examples of the second kind don’t only include (IMA) but plausibly also the following:

- (d) “ P . And my belief that P is unjustified (and it is not one of those beliefs that don’t stand in need of justification).”
- (e) “Would that everyone loved the beautiful, but it is not desirable at all that everyone loves the beautiful.”
- (f) “I shall do ϕ [expression of intention]. But I certainly shouldn’t do it.”

Only the examples of Moore-1 require talk about the speaker’s or thinker’s mind. Examples of Moore-2 don’t need to mention the thinker or what is going on in her mind. Thus, for cases of Moore-2, we get analogs of (IMA) and (IMA_{inf-bel}), i.e., the analogous cases are

¹² Actually there are also a third and a fourth way to create an utterance with a Moorean flavor (as Kyle Ferguson has helpfully pointed out to me). The third is to do something and to combine this with the assertion that one is not doing it. For instance, saying in a squeaky voice “I’m not speaking in a squeaky voice.” The fourth is to do something and to combine it with the assertion that the act does not live up to the standards governing it. For instance, saying, “I have no business speaking right now.” Such cases are more pragmatic because they directly involve an overt act. I will ignore them here.

¹³ This example and the next one are taken from Jack Woods’ (2014, p. 5) paper on expressivism and Moore’s Paradox.

not like (\neg COM1) and (\neg COM2). They have a Moorean flavor in that they don't seem to be obvious cases of contradictory beliefs, and yet the two parts seem to be in immediate rational tension with each other.

For both cases, we can think about the linguistic act of asserting one of these examples and we can think about the mental case in which someone has thoughts that can naturally be expressed by using the sentences of such examples. I am interested in the mental cases that belong under Moore-2, and in particular in (IMA).

We can distinguish these two classes of Moorean Phenomena (each respectively with a linguistic and a mental subcase). It seems to me that they both deserve to be called "Moorean." However, once you see which topic I want to pick out, i.e. mental cases of Moore-2, nothing hangs on the word "Moorean."

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I have argued that if someone makes an inference, she 'takes' her inference to be good. My argument was based on the Inferential Moorean Phenomenon. After laying out the argument, I have shown that the correct understanding of the idea that inference requires a 'taking' rules out many extant accounts of inference. In particular, it rules out views on which the 'taking' is an intuition or seeming. Next I responded to some objections to my argument. If what I said so far is correct, inference requires the reasoner to 'take' her inference to be good and this 'taking' cannot be an intuition or seeming. Thus, the question arises what this 'taking' might be? One idea that naturally suggest itself is that the 'taking' is a belief. It is to this idea that we shall now turn. I will argue that the idea is wrong: the 'taking' is not a belief.

### 3.0 IS THE ‘TAKING’ A BELIEF?

Let me recapitulate the results of our investigation so far. Our question is this: What is inferring? That is, what are we doing when we make inferences? In Chapter 2, we have seen—on the basis of what I will call the “IMA-considerations”—that if someone makes an inference, she must ‘take’ her inference to be good. This ‘taking’ must be such that the reasoner is thereby committed to the goodness of her inference. We are now facing the question: What is this ‘taking-one’s-inference-to-be-good’? A view that naturally suggests itself is that to ‘take’ one’s inference to be good is to believe or to judge that it is good—or to believe or judge something that immediately implies that it is good. After all, we often use a sentence like “She takes it to be raining” as meaning “She believes that it is raining.” Moreover, beliefs and judgments commit the subject to the truth of their content. Thus, the view that ‘takings’ are beliefs or judgments does not succumb to the problems that beset the idea that the ‘taking’ is an intuition or seeming.

Despite its initial plausibility, there are longstanding worries regarding this kind of view. As we have already seen, some think that such views over-intellectualize reasoning and imply that young children and animals cannot make inferences (McHugh and Way, 2016; Winters, 1983). Others worry that such views founder on a Lewis Carroll-style regress (Boghossian, 2003, 2014; Wright, 2014). I want to add to these worries by presenting a novel argument against the view that the ‘taking’ at issue is a belief or judgment. Thus, my task in this chapter is to argue for the following claim.

(NoB) The ‘taking’ involved in inference is neither a belief nor a judgment.

As we will see, the truth of (NoB) rules out two options recently defended in the literature, namely the views advocated by Ram Neta (2013) and Markos Valaris (2014). It will be

helpful to discuss the general family of views with these two concrete examples in mind. To this end, I will present Neta's and Valaris' views in Section 3.1.

I will then go on to argue for (NoB) by arguing that inference has a feature that I call the "*Jemeinigkeit*" of the 'taking' involved in inference, for short: the "*Jemeinigkeit* of inference."<sup>1</sup> The *Jemeinigkeit* of inference consists in the fact that the 'taking' involved in inference must be the work of the reasoner herself; it must be an 'insight' of the inferring person herself. For our present purposes, however, the following consequence of *Jemeinigkeit* will suffice:

(JMK) The 'taking' involved in inference cannot be acquired and held on the basis of testimony.

As we will see, (JMK), in conjunction with some plausible further premises, lends support to (NoB). Ignoring some complications that will arise along the way, my argument can be formulated as follows:

(P1) If the 'taking' were a belief or judgment, acquiring this belief or judgment via testimony would enable us to make the corresponding single-step inference, supposing that all further conditions on inferring were met.

(P2) Acquiring such a belief or judgment via testimony does not enable us to make the corresponding single-step inference, even when all further conditions on inferring are met.

(NoB) Therefore, the 'taking' is neither a belief nor a judgment.

Establishing (JMK) will be the crucial step in the defense of premise (P2). I shall defend this step along with the whole argument in Section 3.2. Next, I will generalize these considerations beyond testimony in Section 3.3. Finally, I will conclude this chapter by discussing some potential objections in Section 3.4.

If the argument of this chapter is successful (and the IMA-considerations from Chapter 2 are also effective), we have ruled out most of the extant theories of inference. Thus, this

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<sup>1</sup> I call this feature "*Jemeinigkeit*" because just as Heidegger (1967, p. 240) says that no one can go proxy for me when it comes to dying—and this is a hallmark of the *Jemeinigkeit* of *Dasein*—so I want to say that no one can go proxy for me when it comes to 'taking' my inferences to be good. The 'taking' must be *je meins*. I must, as it were, 'see' the goodness of my inferences for myself; I cannot take someone's word for it.

chapter, together with the previous one, will make ample room for my own proposal, which I shall present in the next chapter. Figure 2 gives an overview of different views on inference together with the names of some prominent advocates of the different views. The aim of this chapter is to rule out the views encircled by double-lines. The views encircled by finely dashed lines have already been ruled out in the previous chapter. The views encircled by coarsely dashed lines will be discussed in later chapters.

### 3.1 TWO RECENT PROPOSALS: VALARIS AND NETA

Recently some philosophers have advocated the view that if someone makes an inference, she must believe or judge something to the effect that her inference is good. The two most interesting accounts of this kind are due to Ram Neta (2013) and Markos Valaris (2014).<sup>2</sup> In this section, I shall present these accounts and I will offer some initial criticism in order to get a feel for the views under consideration. I will then offer my genuine critique of these positions in later sections of this chapter.

#### 3.1.1 Neta's View

Ram Neta has proposed an account of inference according to which “every inference is simply a judgment with a certain kind of content” (Neta, 2013, p. 404). Neta begins with an account of the content of sentences like “ $P$  and therefore  $Q$ .” He claims that such sentences express two propositions: first, the conjunction of  $P$  and  $Q$ ; and, second, the proposition that something that is made salient by the occurrence of the clause “ $P$ ” stands in a contextually salient explanatory relation to something made salient by the occurrence of the clause “ $Q$ .”<sup>3</sup> The

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<sup>2</sup> Adam Leite (2008) has defended a similar view with respect to believing-for-a-reason. I will not discuss his view here because he does not give a positive account; he merely defends his view against criticism.

<sup>3</sup> Neta puts the view as follows (changed to my notation): “[T]o assert sentences of the form ‘ $P$  and therefore  $Q$ ’ is to assert:  $P$  and  $Q$  [*That<sub>because</sub>*(*that<sub>Q</sub>*, *that<sub>P</sub>*)]” (Neta, 2013, p. 402). Where “*That<sub>because</sub>*” is a deictic element that denotes the contextually salient explanatory relation; “*that<sub>Q</sub>*” is a deictic element that denotes something made salient by the occurrence of the clause “ $Q$ ”; and “*that<sub>P</sub>*” denotes something made salient by the occurrence of “ $P$ .” The square brackets in Neta’s formulation indicate a binary construction—an idea he takes over from Higginbotham (2009). The content in the square brackets is added to the content of “ $P$  and  $Q$ ”—it is the second proposition expressed by “ $P$  and therefore  $Q$ .” An important feature of this

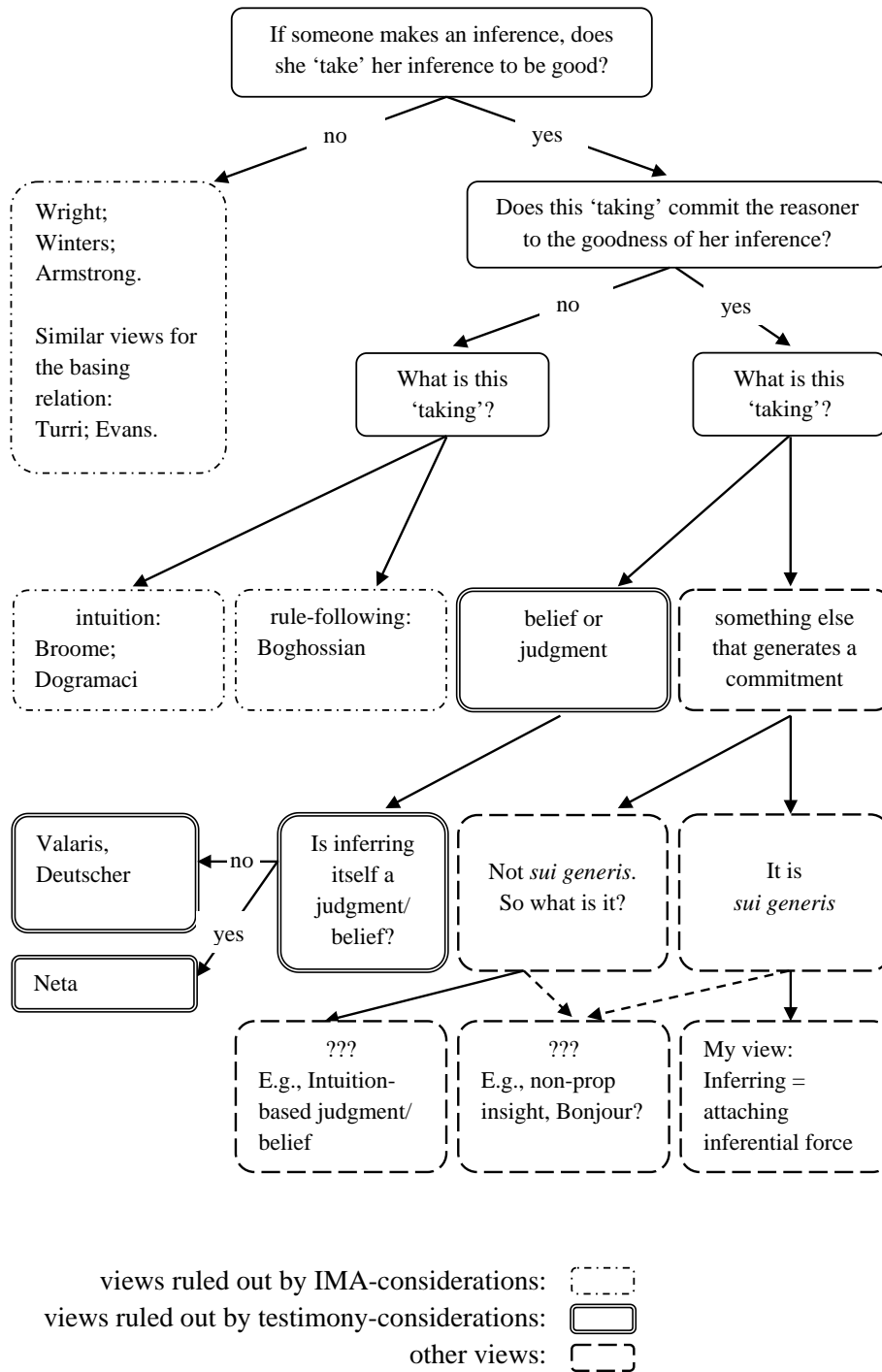


Figure 2: Flow-chart of possible views on inference

second proposition contains three hidden deictic elements, one for each of “ $P$ ” and “ $Q$ ” and one for the explanatory relation. With this account of the content of “ $P$  and therefore  $Q$ ” in hand, Neta claims that to make an inference is to judge such a content.

*Judgment Account of Inference:*

$S$  infers  $q$  from  $p$  =  $S$  judges:  $p$  and therefore  $q$  (where the contextually salient explanatory relation is the relation of doxastic justification, or its practical analog). (Neta, 2013, p. 403)

Neta holds that, in the case of a theoretical inference, what the occurrence of the clauses “ $P$ ” and “ $Q$ ” makes salient are the corresponding beliefs of the reasoner that  $P$  and that  $Q$ .<sup>4</sup> Putting these pieces together we can summarize Neta’s view as follows:

*Neta’s View* For  $S$  to theoretically infer  $Q$  from  $P$  is for  $S$  to judge (under the guise of “ $P$  and therefore  $Q$ ”) two propositions: first, the conjunction of  $P$  and  $Q$  and, second, the proposition that the doxastic justification relation holds between  $S$ ’s belief that  $P$  and  $S$ ’s belief that  $Q$ .

Let’s see what this view amounts to by seeing how it performs under critical pressure. Let me begin with an objection that Neta himself mentions and tries to rebut.

(i) According to Neta, “ $P$  and therefore  $Q$ ” has a certain content, and one infers  $Q$  from  $P$  by judging this content. If “ $P$  and therefore  $Q$ ”—understood as expressing an inference—really expresses a content, then it should be possible to doubt or deny this content. However, it is unclear what could be meant by “She is doubting that  $P$  and therefore  $Q$ ” or “It’s not the case that  $P$  and therefore  $Q$ .” Neta responds to this objection by offering the following explanation:

If “therefore” contains hidden demonstratives, then those demonstratives will tend to take widest scope. Even when “therefore” is within the scope of “believes” or “expects”, we still treat its hidden demonstrative elements as successfully referring. But when “therefore” is within the scope of “doubts” or “denies”, or within the scope of a negation, it’s not clear that we can treat its hidden demonstrative elements as successfully referring: what  $P$ -related thing or  $Q$ -related thing is there for “therefore” to point to? The lack of a clear answer to that question is what explains the unclarity in “Herman doubts (or denies) that

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construction is that assertoric force attaches to the content of “ $That_{because}\langle that_Q, that_P \rangle$ ” even if the whole construction is uttered with non-assertoric force or is embedded in the antecedent or the consequent of a conditional.

<sup>4</sup> He says “the output value of  $that_P$  is [the reasoner’s] belief that  $P$ , and the output value of  $that_Q$  is that very same person’s belief that  $Q$ ” (Neta, 2013, p. 405).

it’s raining and therefore the streets are wet”, or in “it is not the case that it’s raining and therefore the streets are wet”. [...] If any of [the] three [deictic] elements is empty, “therefore” fails to possess a propositional content. Therefore, for a sentence of the form “ $P$  and therefore  $Q$ ” to have a truth-value, there must indeed be two contextually salient things related by a contextually salient explanatory relation. (Neta, 2013, p. 403)

This explanation cannot be right. For consider the following sentence:

- (1) John doubts (/denies) that the room is filled with argon and this is why (/and this is his reason for thinking that) the match fails to ignite.<sup>5</sup>

This sentence (and its variants) isn’t problematic in the way Neta’s sentence is. However, it is difficult to see what, according to Neta’s analysis, the relevant difference might be. If the problem is that the deictic elements in Neta’s analysis fail to refer, why does “this” in (1) not fail to refer? If “this” in (1) fails to refer, why is (1) not problematic? Maybe Neta would reply that the deictic elements in his analysis must refer to beliefs of the subject (in the case of a theoretical inference) while the “this” in (1) does not refer to a belief. Note, however, that if this were correct, sentences like “Herman judges that either Goldbach’s conjecture is false or it is true and 23 236 is therefore the sum of two prime numbers” should also be problematic, which Neta thinks they are not. For Herman might not believe that Goldbach’s conjecture is true. This leads directly to another problem.

(ii) We can infer consequences from assumptions and suppositions. It is false that in order to make a theoretical inference, one must believe the premises and the conclusion. In fact, we might sometimes even be unsure whether we believe certain premises or not; but this does not hinder us in the least to make inferences from these premises. Hence, we must allow some variation in what is made salient by the occurrence of “ $P$ ” and “ $Q$ .”<sup>6</sup> A supposition must be enough to make the deictic elements in the “therefore” refer. And this undermines Neta’s defense against the first objection. For why should Herman not doubt “ $P$  and therefore  $Q$ ” by making the suppositions necessary to make the deictic elements in “therefore” refer?

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<sup>5</sup> If you have trouble parsing the sentence in such a way that everything that comes after the first “that” is inside the scope of “doubts,” you may try to change “John doubts that” to “John doubts the following:”.

<sup>6</sup> That is, Neta’s “*that<sub>P</sub>*” and “*that<sub>Q</sub>*.”

(iii) Inferences are not truth-apt. The inference from  $P$  to  $Q$  cannot be true, nor can it be false (see Ryle, 2009a). Inferences can (perhaps) be valid or invalid, rational or irrational; but they cannot be true or false. Judgments and beliefs, however, can be true or false. If “every inference is simply a judgment with a certain kind of content” (Neta, 2013, p. 404), then inferences must be truth-apt. But they are not.<sup>7</sup>

(iv) Inferences cannot play the roles of premise-attitudes or conclusion-attitudes in inferences. One cannot take an inference as one’s premise-attitude and draw a conclusion from it; nor can the conclusion-attitude of an inference be a further inference. Judgments can, at least in principle, play the role of premise- and conclusion-attitudes (see Ryle, 2009a).<sup>8</sup>

Let me be clear about the nature of my complaints. I do not deny that one can form the kind of judgment Neta describes (or something close enough). What I deny is that such judgments are inferences. Judgments have contents that can be denied, and doubted, they are truth-apt, and they can play the role of premise- and conclusion-attitudes in inferences. Inferences, by contrast, do not have contents that can be doubted or denied (except the premises and the conclusion), they are not truth-apt, and they cannot be the premise- or conclusion-attitudes of inferences. If Neta rejects all of these characterizations of inference, it seems to me that he is simply changing the topic.

At this point, one might think that the problems with Neta’s account have to do with the details of his view. It can seem, e.g., that his claim that inferences are identical to judgments is too strong. So could we perhaps simply move to a similar view that doesn’t assert such

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<sup>7</sup> Neta might want to reply that inferences are indeed truth-apt and that this can be seen by noting that sentences of the form “ $P$  and therefore  $Q$ ” are truth-apt. He might argue that the latter claim is true because “ $P$  and therefore  $Q$ ” passes the standard embedding-test for truth-aptness. However, it can be doubted, quite generally, that if something passes the embedding-test, it is truth-apt. It seems, e.g., that questions, imperatives, and conditionals can be embedded, and for each of these it can be questioned whether they are truth-apt.

<sup>8</sup> Sinan Dogramaci (2013, §7) has recently claimed that some “inferred beliefs are based not (only) on previously existing beliefs, but (also) on previously performed inferences, specifically suppositional inferences.” He mentions examples such as conditional proof and *reductio ad absurdum* (or their analogs in a theory of reasoning). Neta might claim that Dogramaci’s considerations show that inferences can figure as premise-attitudes in other inferences after all. I agree that there are inferences with the structure of conditional proof. However, I do not think that the premise of such an inference is another inference. Rather, one starts with a premise,  $P$ , which one supposes; from this premise one infers a conclusion,  $C$ , which one thereby comes to accept inside the supposition context. Thus, one arrives at the attitude of conditionally accepting  $C$ . This attitude of conditional acceptance can then serve as the premise-attitude of an inference to the (unconditional) acceptance of the conditional,  $P \rightarrow C$ . Thus, we do not need to treat inferences as premise attitudes in order to account for inferences with the structure of conditional proof.



an identity but still claims that the ‘taking’ involved in inference is a belief. Markos Valaris has suggested a view that might seem to fit the bill.

### 3.1.2 Valaris’ View

Valaris (2014, p. 102) argues for the following principle:

(BR) If one believes  $P$  by reasoning from  $R$ , one believes that  $P$  follows from  $R$ .<sup>9</sup>

If we assume, as Valaris seems to do, that an inference is good if the conclusion follows from the premises, then (BR) implies that if someone makes an inference, she must believe something that implies that her inference is good. So Valaris’ position falls squarely within the target range of this chapter.<sup>10</sup>

Valaris begins by distinguishing between basic reasoning and non-basic reasoning. This distinction does not depend on whether a bit of reasoning involves one step or many steps. Rather, non-basic reasoning is reasoning (possibly a single-step inference) that relies on further (antecedent) reasoning. The basic idea behind Valaris’ conception of non-basic reasoning is that if one believes that one has conclusive reason to believe that  $P$  and one is rational, one thereby already believes that  $P$ ; “if one believes both  $R$  and that  $P$  follows from  $R$ , then—barring inattention or irrationality—one thereby believes  $P$ ” (Valaris, 2014, p. 110). Thus, he arrives at the following account of non-basic reasoning:

[N]on-basic reasoning consists in determining that (by one’s own lights, of course) one’s conclusion follows from one’s premisses, and thereby believing one’s conclusion. [...] Non-basic reasoning just is believing that one’s conclusion follows from one’s premisses, and thereby believing one’s conclusion. (Valaris, 2014, p. 111)

According to this account, non-basic reasoning is partly constituted by the connecting belief required by (BR). This, of course, raises the question how one can arrive at such a “connecting

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<sup>9</sup> Here and below, I changed Valaris’ notation to bring it in line with my own notation.

<sup>10</sup> Here is a little bit of background. Valaris’ project is, at least in part, to respond to an argument that (BR) leads to a regress of premises, the kind of regress familiar from Lewis Carroll (1895). According to the argument, the additional belief required by (BR) must figure as a further premise-attitude in the inference to the belief that  $P$ . Valaris denies this. “[W]e should simply deny that the role of the belief that one’s conclusion follows from one’s premisses is to provide one with an extra premiss. That belief must play a role in one’s reasoning distinct from the role that one’s beliefs in one’s premisses play” (Valaris, 2014, p. 107). So Valaris must tell us why a reasoner must have the belief required by (BR). That is what he tries to do with his argument for (BR).

belief” without reasoning. For if all connecting beliefs were acquired via reasoning, a vicious regress would ensue. Hence, Valaris next turns to basic reasoning.

Valaris’ account of basic reasoning is based on the idea that reasoning is a self-conscious act. More specifically, he holds that the following principle of higher-order-belief is true (Valaris, 2014, p. 113):<sup>11</sup>

(HOB) If one believes  $P$  by reasoning from  $R$ , one believes, without observation or inference, that one believes  $P$  for reason  $R$ .

With (HOB) in place, Valaris goes on to add the following thesis (Valaris, 2014, p. 116):

(GR) If one believes that  $R$  is one’s reason for believing  $P$ , then one believes that  $P$  follows from  $R$ .

Together with (HOB), (GR) obviously entails (BR). Moreover, Valaris holds that, in the case of basic reasoning, the belief mentioned in the consequent of (GR) is not based on any independent grounds. Rather, it is simply held because one cannot believe that one’s reason for believing  $P$  is  $R$  without believing that  $P$  follows from  $R$ . Hence, we are not launched on any vicious regress. Valaris claims that for “subjects equipped with our capacity for higher-order belief, reasoning from  $R$  to  $P$  just is, in part, believing that  $P$  follows from  $R$ ” (Valaris, 2014, p. 118).<sup>12</sup>

Let us again get a better sense for the view under consideration by applying some pressure to it. Two points can help to see where Valaris stands relative to the considerations we have seen in the previous chapter.

(i) The only reason Valaris gives for believing that (GR) is true is that “there is a difficulty with, for any particular belief, simultaneously believing that one has it for reason  $R$  and also failing to believe that  $R$  is a good reason for it” (Valaris, 2014, p. 116). Later he spells this out in a bit more detail:

As I have argued, if one believes  $P$  by reasoning from  $R$  one recognizes that one’s reasons for believing  $P$  consist in  $R$  [...]. But then, if one does not also believe that  $P$  follows from

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<sup>11</sup> He thinks that (HOB) is a special case of the more general thesis: “it is a necessary truth about us that we are often (though not always) in a position to know what we believe and why, without observation or inference” (Valaris, 2014, p. 114).

<sup>12</sup> It is because of the “in part” that, in Figure 2, I do not classify Valaris as holding that inference is a kind of belief.

*R*, one would seem to be guilty of some kind of incoherence. One cannot coherently and knowingly go on believing *P* for reason *R* while disbelieving, or even merely being agnostic about, the proposition that *P* follows from *R*. (Valaris, 2014, p. 124)

There are at least two problems with this argument for (GR). First, most of us are in incoherent states of mind most of the time; this does not prevent us from reasoning. Hence, the mere fact that violating (GR), and hence (BR), requires one to be in an incoherent state of mind does not show that one cannot violate (BR). At best, it shows that violating (BR) is irrational. Valaris does not show, as he aims to do, that violating (BR) is impossible. Second, I am not willing to grant Valaris his premises. In particular, I doubt that it is incoherent to knowingly believe *P* for reason *R* while failing to believe that *P* follows from *R*. All the phenomena Valaris points to in support of this claim can be explained in a better way. It might be true that one cannot “coherently and knowingly go on believing *P* for reason *R* while disbelieving [...] the proposition that *P* follows from *R*,” or something close to it might be true. However, it does not follow that inferring involves a belief that *P* follows from *R*. At best, it follows that inferring involves a commitment engendering transparent ‘taking’ that *P* follows from *R*.<sup>13</sup> Such a ‘taking’ can explain all the facts about “incoherence” to which Valaris appeals: Disbelief is irrational because it leads to incoherent commitments. Agnosticism is irrational because the reasoner is already committed to the goodness of her inference; insofar as the aim of withholding judgment is that one does not incur a corresponding commitment, this aim cannot be attained.<sup>14</sup> All the force of Valaris considerations is absorbed by the IMA-considerations. The phenomena Valaris points to can be explained by the fact that inference requires the reasoner to ‘take’ her inference to be good, which we already knew from chapter 2. Our current question is: What is this ‘taking’? Valaris arguments don’t speak in favor of the ‘taking’ being a belief rather than something else that generates a suitably transparent commitment.

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<sup>13</sup> I take Valaris’ argument to be a less than ideal way of getting at the IMA-considerations.

<sup>14</sup> Note that Valaris does not mention the possibility of neither disbelieving, nor believing, nor suspending judgment towards the relevant proposition. My view predicts that this lack of belief-like attitude is neither incoherent nor irrational. For in such a case, there is nothing that could conflict with the ‘taking.’ I think that this is the intuitively correct prediction. Valaris’ view predicts that such a lack of belief-like attitude is impossible.

(ii) Valaris' presentation of his argument is misleading. According to Valaris' argument for (GR), the reason why there is a problem with believing  $P$  for the reason  $R$  and, simultaneously, believing that  $P$  does not follow from  $R$ , is that one cannot coherently hold the latter belief and also the belief that one believes  $P$  for reason  $R$ . However, this gets things the wrong way around. Suppose someone believed, *per impossibile* (according to Valaris),  $P$  for reason  $R$  without believing that he does so. Could this person "coherently" believe that  $P$  does not follow from  $R$ ? I don't think so. To think, " $P$ ; therefore,  $Q$ . But  $Q$  does not follow from  $P$ ," is no less problematic than to think, "I believe  $Q$  for the reason  $P$ . But  $Q$  does not follow from  $P$ ." Indeed, if one of these two thoughts can be thought rationally, it must be the latter one. Not knowing that one believes  $Q$  for reason  $P$  might be a reason to think that the incoherence is not culpable or that the subject should not be blamed for it, but not knowing one's own thoughts certainly does not make these thoughts immune to "incoherence." Hence, the incoherence that is supposed to motivate (GR) does not depend on the presence of a higher-order-belief. Valaris misidentifies the source of the "incoherence." Thus, (HOB) is unnecessary. It is a mere distraction. If Valaris' argument for (BR) went through, there would be a much simpler argument for the following conclusion:

(GR+) If one believes  $P$  for reason  $R$ , then one believes that  $P$  follows from  $R$ .

But this claim is, for present purposes, virtually identical to (BR). After all, Valaris thinks that "[r]easoning is a sophisticated species of the broader phenomenon of *believing for a reason*" (Valaris, 2014, p. 105).<sup>15</sup> Hence, if Valaris' argument for (GR) really were a good argument, then it should suffice, by itself, to establish (BR).

Given these problems, I do not think that Valaris has made a convincing case for (BR). Rather than continuing the discussion in a piecemeal fashion, however, I will now give a general argument to the effect that all views that are relevantly like those advocated by Valaris and Neta are untenable.

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<sup>15</sup> My view is that it is a mistake (or at least an unhelpful way of talking) to identify inferring (or reasoning) with a species of believing-for-a-reason. Once we reject this identification, the arguments in the rest of this chapter show that the analog of Valaris' approach to the dynamic phenomenon of inferring is untenable—especially in the cases he calls "non-basic reasoning." I think, however, that my arguments also carry over to believing-for-a-reason, i.e. the static phenomenon. In general, I think that inferring stands to believing-for-a-reason as judging stands to believing.

## 3.2 TESTIMONY AND INFERENCE

As already intimated in the introduction to this chapter, the central idea behind my argument against the view that the ‘taking’ involved in inference is a belief or judgment is the idea that this ‘taking’ is *jemeinig*. What I mean by this is, *inter alia*, that the ‘taking’ cannot be acquired by (merely) accepting testimony. I claim:

(JMK) The ‘taking’ involved in inference cannot be acquired and held (merely) on the basis of testimony.

In this section, I shall argue that (JMK) is true and that it lends support to the claim that the ‘taking’ involved in inference is neither a belief nor a judgment, i.e. (NoB) is true. Before I turn to my arguments for (JMK) and (NoB), I want to clarify what I mean by (JMK).

### 3.2.1 Clarifying My Thesis

Here is a way into the topic of this section: When someone informs me that  $P$  and that  $Q$  follows from  $P$ —and I believe her and no defeaters are present—then I can infer that  $Q$ . Indeed, I can do so in a single step. But what are the premises of the inference that brings me to believe that  $Q$ ? In principle, there seem to be two possibilities: First, my premises might be that  $P$  and that  $Q$  follows from  $P$  (or a suitable corresponding conditional). Second, it might be that I reason from just one premise, namely  $P$ . In the latter case, the formula that  $Q$  follows from  $P$  is not a formula *from which* I reason but a formula *in accordance with which* I reason—as Mill (1882, p. 146, or book II, chap. iii, §4) might have put it. It is plausible that using something as a principle *in accordance with which* to reason is nothing other than ‘taking’ one’s inference to be good. After all, we already know that inference involves ‘taking’ one’s inference to be good. This ‘taking’ is how we ‘see’ the (apparent) connection between the premises and the conclusion of our inference. And the idea of “using something as a principle *in accordance with which to reason*” is, I take it, meant to capture the same phenomenon: our ‘take’ on the connection between the premises and the conclusion. Thus, there are in principle two possibilities for how I arrive at the belief that  $Q$ . I either use the claim that  $Q$  follows from  $P$  as a premise, or I ‘take’  $Q$  to follow from  $P$  and thereby infer

$Q$  from  $P$  as my single premise. I shall argue that only the first of these two possibilities is ever realized, the second does not occur. That is the idea expressed in (JMK).

I claim that we cannot acquire the kind of ‘taking’ involved in inference by merely accepting someone’s testimony. By “merely” I mean that we cannot do so without putting in some intellectual work that goes beyond merely grasping the meaning of and accepting what the other person says. Here “grasping the meaning” means the thing that we do when we hear a simple sentence in our native language and that we do not do when we hear a sentence in a language we are not able to speak, i.e., it does not include a grasp of why the thing said is true or any kind of finding out for oneself that it is true. It should be uncontroversial that this is possible. After all, I can come to believe, e.g., mathematical propositions on the basis of testimony without understanding why they are true. Similarly, it should be possible to come to believe that things are as they are ‘taken’ to be in making a particular inference without understanding why and how this is true.

In order to avoid misunderstandings, I want to state clearly what I do *not* say: First, I don’t say that we cannot infer conclusions from premises that we learned by testimony. Second, I don’t say that it is impossible that someone says something and this brings you to ‘see’ how the premises and the conclusion of an inference hang together and, thus, enables you to make the inference. What I deny is that you can do the ‘seeing’ by merely accepting testimony. Third, I don’t say that we cannot acquire knowledge about the goodness of inferences via testimony. Fourth, I don’t say that testimony doesn’t play an important role in the acquisition of inferential abilities. When we learn to make a new kind of inference, being told certain facts often plays an important role in this. Often our thoughts and actions must be guided by our teachers in order to acquire inferential abilities. This does not mean, however, that we can form the ‘taking’ involved in inference solely on the basis of testimony.

Before I present my argument, I would like to point out that my thesis is independent from a number of other questions, such as the following: Is testimony an independent source of warrant or can its epistemic role be reduced to other sources of warrant? Is a belief that one acquires by testimony always based on other beliefs? Is it always an inferentially acquired belief? These are questions about how and why we are justified in holding beliefs acquired by testimony and about how we acquire such beliefs. In contrast, my thesis is a

thesis about what we can do with beliefs that we acquire through testimony. My question is a question about what can happen downstream from testimony, while the questions just mentioned are questions about what happens, or rationally ought to happen, upstream from testimony. Hence, the topic of this section is independent from the usual debates about the epistemology of testimony (for an introduction to the latter see [Adler, 2008](#)).

### 3.2.2 The Argument

I have clarified what I mean when I say that we cannot acquire the ‘taking’ involved in inference via testimony. But why should we believe that this is true? And why does this rule out the view that the ‘taking’ at issue is a belief or judgment? In this subsection, I shall begin to address these issues. I will lay out my argument momentarily. In the following two subsections, I will defend its premises. And I will end this section by returning once more to Neta and Valaris.

Let’s begin with an abstract description of the situation at issue: Imagine someone believes that  $P$  and wonders whether  $Q$ . As it happens,  $Q$  can correctly be inferred from  $P$ , but the agent can’t infer that  $Q$ , only because she fails to ‘take’ the inference from  $P$  to  $Q$  to be a good inference. If she were to ‘take’ this inference to be good she could, and would, infer  $Q$ . I claim that even if the reasoner were *told* that the inference is good, she would not be in the position to infer  $Q$  directly from  $P$ . But if the ‘taking’ were a belief, it should be possible to form such a belief on the basis of testimony. In cases where the ‘taking’ is the only thing that is missing, this would mean that forming a belief about the goodness of an inference on the basis of testimony could enable the subject to make the inference. But that is false. We can formulate the argument as I did at the beginning of this chapter (repeated here):

- (P1) If the ‘taking’ were a belief or judgment, acquiring this belief or judgment via testimony would enable us to make the corresponding single-step inference, supposing that all further conditions on inferring were met.

(P2) Acquiring such a belief or judgment via testimony does not enable us to make the corresponding single-step inference, even when all further conditions on inferring are met.

(NoB) Therefore, the ‘taking’ is neither a belief nor a judgment.

As already intimated (JMK) will play a crucial role in the defense of premise (P2). Let us begin, however, by looking at premise (P1).

### 3.2.3 Premise (P1)

The idea behind the first premise is this: In order to deny (P1), one would have to deny that acquiring the belief was sufficient to perform the inference. But this simply isn’t an option for those who identify the ‘taking’ with the belief: we’ve stipulated a case where the only thing missing is the ‘taking’—hence, for those theorists, the belief.

I can imagine two lines of resistance against this way of thinking: First, an opponent might hold that the ‘taking’ is a belief or judgment but that this particular belief or judgment cannot be acquired via testimony. Second, an opponent might claim that it is impossible that everything is in place for the reasoner to make the inference except the ‘taking.’ Let’s look at these two potential lines of resistance in turn.

Beliefs and judgments are typically the kind of thing that can be formed on the basis of testimony. In fact, this is crucial for our ability to share our knowledge and, hence, for the social division of labor in the epistemic domain. If I cannot form a belief or judgment on the basis of your testimony, you cannot pass on the bits of knowledge that you express in your testimony. If it were a widespread phenomenon that beliefs and judgments cannot be acquired via testimony, our collective quest for knowledge would face insurmountable obstacles. Given that this doesn’t seem to be the case, by default, we should assume that beliefs and judgments can be formed on the basis of testimony.

Now, my opponent might point out that there are some special beliefs and judgments that cannot be formed on the basis of testimony.<sup>16</sup> It seems, for example, that we cannot

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<sup>16</sup> According to some recent but controversial views on understanding-why, understanding-why cannot be transmitted via testimony (Carter and Pritchard 2014; Hills 2015, for criticism see Sliwa, 2015). Could ‘taking’ be an understanding-why? The best worked-out account of understanding-why on which it cannot



form aesthetic judgments, perceptual beliefs, and perhaps certain moral beliefs on the basis of testimony.<sup>17</sup> After all, if you come to believe that something is a great work of art on the basis of my say-so, there is a sense in which this shouldn't count as an aesthetic judgment of yours. And similarly for perceptual beliefs and judgments. Thus, the opponent may hold that the 'takings' involved in inference are like aesthetic or perceptual beliefs and judgments in this respect.

While it is true that aesthetic and perceptual beliefs and judgments cannot be acquired via testimony, I think it is implausible to claim that beliefs or judgments about the goodness of inferences also belong in this class. After all, there is a simple explanation for why aesthetic and perceptual beliefs and judgments cannot be acquired via testimony. In order to be genuinely aesthetic or perceptual in nature, these beliefs and judgments must be based on the deliveries of our sensible capacities; they must be held because the subject enjoyed the right kind of perceptual or emotional experiences. It is implausible, however, that beliefs or judgments about the goodness of inferences must be based on the deliveries of our sensible capacities. After all, the goodness of inferences doesn't seem to be the kind of thing we can perceive or feel.

To be sure, we often speak about 'seeing' the connection between the premises and the conclusion, and this suggests the involvement of some quasi-perceptual faculty. However, we have already ruled out the view that 'takings' are intuitions or seemings. So we cannot take the metaphor of 'seeing' a connection literally. Rather, this metaphor seems to merely hint at the very fact we are currently discussing, namely that the 'taking' cannot be acquired via testimony.

Another reason to be suspicious of this line of resistance is that the reason why aesthetic and perceptual beliefs and judgments cannot be passed on via testimony is that they are defined in terms of how they are acquired. I can form a belief and judgment about a piece of art on the basis of testimony; it just won't be an aesthetic judgment because I acquired it in the wrong way. There is no reason to think, however, that 'takings' must be defined in terms of how they are acquired. Whether or not we can use something as a 'taking' in an

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be transmitted via testimony is due to Alison Hills (2015). However, Hills explains understanding-why in terms of the ability to make certain inferences. Hence, we cannot appeal to Hills' account at this point.

<sup>17</sup> I will say much more about the moral case in later chapters. Hence, I will ignore this case here.

inference is not a matter of how it came about but of what we can do with it. Hence, if the opponent wants to argue that ‘takings’ are beliefs that must be acquired in a particular way, she faces the difficult task of telling us why only beliefs that are acquired in this particular way can be used as ‘takings’ in inferences. In sum, the view that ‘takings’ are beliefs or judgments that cannot be acquired and held on the basis of testimony seems fraught with problems.

In a final attempt to hold up this line of resistance, an opponent might focus on Neta’s view and say that one cannot acquire beliefs like “My belief that  $Q$  doxastically justifies my belief that  $P$ ” by (merely) accepting testimony. After all, how can anyone be better informed than I am about the basing relation that holds among my own beliefs? However, I doubt that this is a plausible objection. After all, there are cases in which it is difficult to know how our own beliefs are doxastically justified, and epistemologists frequently make claims about how certain beliefs are typically doxastically justified, e.g., in cases of forgotten evidence. It seems to me that I can sometimes take their word for it, as applied to my own case. And if that is possible, it is possible to acquire the ‘taking’ at issue via testimony.

To this someone might reply that the problem is not just that the belief or judgment at issue is about myself, but that it is genuinely first-personal. This, however, cannot be the whole story because I can acquire first-personal knowledge by accepting testimony. I can, e.g., learn where I am by accepting the testimony of someone who tells me: “You are in Leipzig.” One may try to refine this view by saying that the belief or judgment at issue is similar to practical knowledge of what I am doing. It seems implausible, however, that we know which inferences are good in the way in which we know what we are doing. After all, we don’t make inferences good by making them. An opponent might hold that there is nevertheless some broad similarity between the belief at issue and practical knowledge—a similarity that explains why neither belief can be acquired via testimony. I think there is something right about thinking there is a similarity here. But that is because practical knowledge must be explained in terms of practical inference (see [Anscombe, 2000](#)).

What about the second line of resistance? That is, the idea that it is impossible that everything is in place for the reasoner to make the inference except the ‘taking.’ The idea must be that if the belief or judgment that is the ‘taking’ is not present, then something

else that is required for inference is also lacking and that other thing cannot be acquired via testimony. We can distinguish two kinds of things that could be lacking. Either what is lacking is some cognitive condition, e.g., some intuition, insight, or understanding. Or what is lacking is some non-cognitive condition, e.g., a disposition to come to believe the conclusion (in the right way). If it is the latter that is lacking, we—as philosophers—can bring in one of the notoriously clever neuroscientists to ensure that the non-cognitive condition holds. Once the neuroscientist has done her work, acquiring a suitable belief or judgment via testimony will enable the reasoner to make the inference. And, hence, premise (P1) holds. If, on the other hand, what is lacking is a cognitive condition, then we should say, I think, that this cognitive condition is part of the ‘taking’ we are trying to understand. In that case, the ‘taking’ in question cannot be just a belief or judgment and, hence, (NoB) is true.

My response to the last option leaves open the possibility that the ‘taking’ we are trying to understand consists in a belief or judgment plus some other cognitive condition that cannot be shared via testimony. Notice, however, that an advocate of such a view would have to explain why both of these elements are needed and what their role in inference is. I cannot see any plausible way of doing this. In the absence of any clear advantages, we should avoid unnecessary complications by which we incur additional explanatory burdens. Thus, I think this last possibility isn’t really a live option.

We have seen that neither line of resistance against premise (P1) looks tenable. In the very least, a lot of work would be required to make a view along one of these lines plausible. So we should accept (P1). Let us now turn to the second premise of the argument for (NoB).

### 3.2.4 Premise (P2)

Recall that premise (P2) says that acquiring a belief or judgment (about whatever the opponent claims the content of the ‘taking’ is) via testimony does not enable us to make the corresponding single-step inference, even when all further conditions on inferring are met. What would it mean for (P2) to be incorrect? If premise (P2) is false, the following situation can arise: You believe that  $P$ , and all conditions for you making the inference from  $P$  to  $Q$  are met, except that you cannot (by yourself) come to enjoy the ‘taking’ necessary for

inferring  $Q$  from  $P$ . You are then given (ideal) testimony to the effect that this is a good inference. This enables you to make the inference from  $P$  to  $Q$ . And this enabling effect of the testimony does not arise from you thinking about the matter for yourself.

In fact, this is not a possible situation and, hence, (P2) is true. To help me make the point, let me borrow some terminology from Sinan Dogramaci (2013). He calls something a “hard consequence” of a premise-set for a reasoner just in case the reasoner is not able to infer it from the premise-set in a single-step inference. Here is an illustration: In a famous incidence, Godfrey Hardy was visiting the mathematical genius Srinivasa Ramanujan in hospital and remarked that he got there in a cab with the number 1729 and that this was a rather dull number. Ramanujan replied that, on the contrary, it was an interesting number because it is the smallest number expressible as the sum of two positive cubes in two different ways. Idealizing the case a bit and ignoring complications that might arise from the fact that the example involves calculation, we can assume that Ramanujan made the following single-step inference:

- (a) The cab number is 1729.
- (c) Therefore, the number of the cab is the smallest number expressible as the sum of two positive cubes in two different ways.<sup>18</sup>

I take it that for almost everyone, even for a mathematician of Hardy’s caliber, this conclusion is a hard consequence of the premise. Only a genius like Ramanujan immediately ‘takes’ (c) to follow from (a). He doesn’t need to go through any intermediate steps in his reasoning, let’s assume. Now, suppose that Ramanujan told Hardy that one can correctly infer the conclusion (c) from the premise that the cab number is 1729—or told him whatever else the content of the required belief might be. Would this have enabled Hardy to make the very same inference as Ramanujan, supposing that all other conditions on inference were met? That seems incredible. Of course, Hardy can, e.g., make the following inference:

- (a) The cab number is 1729.

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<sup>18</sup> Notice that nothing hangs on this particular example or on whether it is plausible that this is in fact a single-step, non-enthymematic inference for Ramanujan. All that is needed is an inference that someone cannot make because she cannot ‘take’ the inference to be good. I use Ramanujan as an example because it is plausible that he is better with numbers and inferences regarding numbers than any of my readers. He is the kind of person who can make inferences most of us can clearly not make.

- (b) If the cab number is 1729, then the number of the cab is the smallest number expressible as the sum of two positive cubes in two different ways (as Ramanujan just told me).
- (c) Therefore, the number of the cab is the smallest number expressible as the sum of two positive cubes in two different ways.

But that is a different inference. After all, it has two premises, whereas the inference that Ramanujan made has only one premise. Ramanujan cannot transmit his inferential abilities merely by giving Hardy the belief that (c) can correctly be inferred from (a).<sup>19</sup> Unless testimony enables Hardy to immediately realize or ‘see’ the connection between (a) and (c) for himself, no belief in (c) can count as the result of an inference from (a) alone.

Examples like this can be multiplied indefinitely. In fact, the general structure can be used to argue for a general claim. Take any inference that could in principle be made by a given subject. Next, imagine that the subject does not ‘see’ the connection between the premises and the conclusion, i.e., the subject cannot ‘take’ the inference to be good. Now introduce some trustworthy testimony to the effect that the inference is good—or whatever the content of the belief or judgment that is the ‘taking’ is supposed to be (according to the opponent). Stipulate that all further conditions on inferring are met and then ask whether the subject can now make the inference in virtue of doing nothing more than accepting the testimony. The answer will be a resounding “No!”, and this shows that the ‘taking’ cannot be what the subject acquired by accepting the testimony, i.e. a belief or judgment. What this brings out is that (JMK) is true and that it cannot be accommodated by accounts on which the ‘taking’ is a belief or judgment.

As far as I can see, we have already discussed the only ways to get around this conclusion: either saying that the ‘taking’ is a special kind of belief or judgment that cannot be acquired via testimony, or saying that something other than the ‘taking’ is missing in such cases. We have already seen above that neither of these options is plausible. So we should accept (P2), along with (P1), and conclude that (NoB) is true, i.e., that the ‘taking’ involved in inference is neither a belief nor a judgment.

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<sup>19</sup> Testimony might “indirectly” get one to appreciate the goodness of an inference, but what the foregoing considerations show is that it would do this precisely by giving one something over and above a belief.

We can use the phenomenon exploited in this section to formulate a second criterion of adequacy for accounts of inference. I rejected the idea that the ‘taking’ involved in inference is a belief or judgment on the basis that such an account cannot explain why we cannot acquire such ‘takings’ by merely accepting testimony. We can formulate the idea that is driving this reasoning in the following criterion of adequacy.

CoA2      An account of inference is adequate only if it can explain the *Jemeinigkeit* of ‘taking’ involved in inference.

That means that accounts of inference must explain (JMK). If an account of inference suggests that the ‘taking’ involved in inference can be acquired via testimony and has nothing to say about why this is not the case, the account is unsatisfactory. To see how powerful this result is, let’s return to Valaris’ and Neta’s views once more.

### 3.2.5 Valaris and Neta Again

Valaris (2014, p. 112) says that “non-basic reasoning just is believing that one’s conclusion follows from one’s premisses, and thereby believing one’s conclusion.” Nothing in his account rules out that the belief that one’s conclusion follows from one’s premisses is acquired via testimony. But in that case, why can Hardy not make the inference Ramanujan makes? After all, Hardy can surely come to believe that (c) follows from (a) on the basis of Ramanujan’s testimony.

Perhaps Valaris would want to reply that Hardy can come to believe that (c) follows from (a) but he cannot *thereby* believe (c). That is, Valaris might hold that testimony cannot transmit the ‘thereby-bit’ of what is required for inference. In fact, it is not open to Valaris to say this. Recall that he says that the “crucial point here is that, if one believes both *R* and that *P* follows from *R*, then—barring inattention or irrationality—one thereby believes *P*” (Valaris, 2014, p. 110). But Hardy’s inability to make Ramanujan’s inference is not due to inattention or irrationality. After all, he also draws the conclusion (c); he just needs one more premise.

So Valaris' account does not satisfy our second criterion of adequacy [CoA2](#). The source of the problem is that Valaris thinks that the 'taking' at issue is a belief. Does Neta's view fare any better when pitted against [CoA2](#)?

Recall that Neta holds that "every inference is simply a judgment with a certain kind of content" (Neta, 2013, p. 404). This immediately raises the question: Can we form such judgments on the basis of testimony? Nothing in Neta's view speaks against this possibility. That means that Neta cannot explain why Hardy cannot make the inference Ramanujan makes—on the basis of Ramanujan's testimony.

As already noted above, Neta might reply that Ramanujan is in no position to testify to Hardy's beliefs and the basing relations that hold among them. And these beliefs and basing relations are what the 'taking' is about, on Neta's view. As I have already pointed out above, I don't see why Ramanujan can never be in a position to give testimony about these matters. After all, we can assume that the Ramanujan from our example is not only a mathematical genius but also an outstanding psychologist and neuroscientist, who can (under favorable conditions) find out what someone believes and for which reasons even if the subject herself is unaware of these beliefs. If you want, we can also construct a case where I provide testimony to my future self.

In order to drive the point home, let me point out that whether or not Ramanujan can ever be justified in giving the required testimony, we can assume that he makes the appropriate assertions anyway and that Hardy believes him. This case creates the following problem for Neta's view. Either Neta must say that Hardy made the inference Ramanujan made, or he must say that Hardy cannot come to judge, on the basis of testimony, that his belief that the cab number is 1729 doxastically justifies his belief that the number of the cab is the smallest number expressible as the sum of two positive cubes in two different ways. However, saying that, in the case described, Hardy makes Ramanujan's inference seems blatantly false. That Hardy can form the mentioned judgment—however unjustified he may be in doing so—seems hard to deny. After all, people form the silliest judgments on the basis of testimony. To say that this deplorable fact about humans does not apply to assertions about doxastic justification relations among the hearer's beliefs is certainly overly optimistic.

To sum up, neither Valaris’ nor Neta’s view can accommodate the truth of (JMK). Their views don’t satisfy the criterion [CoA2](#). Their views don’t have the resources to explain why we cannot acquire the ‘takings’ involved in inference via testimony. The source of the problem is the view that the ‘taking’ involved in inference is a belief or judgment. For once we are told what the content of the belief or judgment is supposed to be, we can simply come out and assert that content. Given (JMK), advocates of the view that the ‘taking’ is a belief or judgment must then say that one cannot come to form the belief or judgment by accepting what is said. But that is an untenable position.

### 3.3 GENERALIZING BEYOND TESTIMONY

We have seen that the ‘taking’ involved in inference cannot be formed on the basis of testimony. This raises the general question whether the ‘taking’ can be formed in any of the other ways in which we usually form beliefs and judgments. Two ubiquitous belief-forming mechanisms that come to mind are inference and perception. Thus, two questions arise: (1) Can we form the ‘taking’ involved in inference (solely) by making another inference? (2) Can we form the ‘taking’ involved in inference (solely) on the basis of perception? I think that the answer to both questions is “no.” However, I also think that these cases are more complicated than the case of testimony because inference and observation often give us a kind of insight or understanding that goes beyond merely acquiring a belief or judgment. Let’s look at the cases of inference and perception in turn.

#### 3.3.1 ‘Taking’ by Inference?

In order to see that there is a problem with acquiring ‘takings’ via inference, we can modify our old case of Ramanujan and Hardy. For we can construct a case in which Hardy arrives at the realization that Ramanujan’s inference is good by making an inference. Here is a simple case of this sort:



Hardy-2 Suppose a reliable and trustworthy source tells Hardy that every inference Ramanujan makes (regarding numbers) has whatever property is ascribed to the inference in the relevant ‘taking.’ Moreover, suppose Ramanujan says: “The cab number is 1729. Therefore, the number of the cab is the smallest number expressible as the sum of two positive cubes in two different ways. And by the way, I have given you my complete inference; I haven’t used any other premise in this inference.” From this Hardy can infer that the inference Ramanujan made is a good inference—in the sense of having the property ascribed to the inference in the ‘taking’ involved in the inference itself. Clearly, Hardy still cannot make the inference Ramanujan makes.

The case is exactly parallel to the case in which Hardy is supposed to acquire the relevant ‘taking’ via testimony, except that this time he is supposed to acquire the ‘taking’ via inference. We can go through all of the moves and replies that I have discussed above again, and the result will be the same as above.<sup>20</sup> As long as the inference does not enable Hardy to ‘see’ for himself how the premise and the conclusion of Ramanujan’s inference hang together, he will not be able to make the inference. Hence, the problem we have encountered above does not depend on anything that is specific to testimony. Rather, it has to do with the nature of the ‘takings’ we are interested in. At the very least, inference alone is not enough to acquire such a ‘taking.’

Of course, we might think that we can sometimes reason our way to a ‘taking’ but that we can do this only if the reasoning also results in us ‘seeing’ the connection between the premises and the conclusion of the inference for which the ‘taking’ serves as a ‘taking.’ But then, we are again left with two things: the result of the first inference and the ‘seeing’ of the connection between premises and conclusion. And we would have to explain how these two things hang together. In the absence of such an explanation, I think we should conclude that ‘takings’ cannot be the result of antecedent inferences. We don’t ‘take’ an inference to be good as the result of another inference. This lends further support to the claim that these ‘takings’ are neither beliefs nor judgments.

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<sup>20</sup> I will leave it as an exercise for the reader to go through all the parallel maneuvers and reactions from above. Most of them apply with only superficial changes.

This result is in direct conflict with Valaris’ view on what he calls “non-basic reasoning,” i.e., reasoning for which the “connecting belief” is itself the product of reasoning. Valaris describes such a case as follows:

Suppose that Fred is a police detective investigating a murder. Fred finds a bloody knife in the garden and concludes that the butler committed the murder. According to (BR), this entails that Fred believes that it follows from the presence of the bloody knife in the garden that the butler did it. But, of course, we can go on to ask why Fred believes this. How did he arrive at the belief that it follows from the presence of the bloody knife in the garden that the butler committed the murder? We expect that this question will have a substantive answer, which, most likely, will involve further reasoning. That is what makes this a case of non-basic reasoning. (Valaris, 2014, p. 109)

If ‘takings’ cannot be acquired by making inferences and Fred’s belief that it follows from the presence of the bloody knife in the garden that the butler did it is supposed to serve as a ‘taking’ in the inference to the conclusion that the butler did it, then it cannot be the result of a further inference. The belief that it follows from the presence of the bloody knife in the garden that the butler did it may, of course, serve as a premise in the inference to the conclusion that the butler did it. That seems to be a plausible description of Valaris’ case. That is not, however, how Valaris himself understands the case.

The result, I think, is that unless we can explain how an inference can lead one to ‘see’ the connection between premises and conclusion—in the sense required for inference—we cannot make sense of Valaris’ notion of *non-basic reasoning*. For without such an explanation, we cannot make sense of the idea that ‘takings’ can be acquired via inference.

### 3.3.2 ‘Taking’ by Perception?

Can we acquire the kind of ‘taking-one’s-inference-to-be-good’ involved in inference on the basis of perception? It is at least not obvious that we can perceive the goodness of inferences. This makes it hard to come up with clear examples on which we could test the idea that we can form such ‘takings’ on the basis of perception. We are not interested in cases where what is perceived is, in effect, testimony to the effect that the inference is good (e.g. someone holding up a sign or a computer checking the validity of an inference). Nor are we interested in cases in which we repeatedly make an inference and each time observe that the conclusion is true. After all, making the inference presupposes that we can already ‘take’ it to be good.

As far as I can see, the most plausible kind of example would be one inspired by David Hume. Recall what Hume says about the idea of a necessary connection:

[A]fter a repetition of similar instances, the mind is carried by habit, upon the appearance of one event, to expect its usual attendant, and to believe that it will exist. This connexion, therefore, which we feel in the mind, this customary transition of the imagination from one object to its usual attendant, is the sentiment or impression from which we form the idea of power or necessary connexion. (Hume, *An Enquiry Concerning Human Understanding*, 7.2, p. 75)

Whatever we think about Hume's doctrine regarding necessary connections, he is surely right that we tend to associate two events in our minds when we repeatedly observe them together, or one followed by the other. If this association is an inference, it could seem that we can acquire the 'taking' involved in inference by observation.

There are difficult questions in the vicinity regarding whether what Hume describes should count as a genuine inference or rather as a mere association of ideas, the proper subject of a mere "physiology of the human understanding" (Kant, KrV, A ix). I want to sidestep these issues here and grant Hume that the acquisition of inferential abilities often involves some habituation. I think we can stay agnostic about whether this habituation suffices to bring about the appropriate 'taking.' After all, whatever this kind of habituation exactly turns out to be, it is not the kind of thing we ordinarily mean when we talk about "learning things through perception." When I see that the door is shut and conditions are ordinary, I can come to know that the door is shut. No habituation is needed to learn this particular fact. Some habituation might play a role in acquiring the perceptual capacities I exercise on this occasion, but this habituation is not a straightforward case of learning something by observation.

Moreover, when we acquire an inferential ability through repeated observations, we thereby also acquire some grasp of how the premises and the conclusion hang together. When I learn to infer "This thing will fall to the ground (or whatever is beneath it)" from "I loosen my grip on this otherwise unsupported thing" by repeatedly making the observation that things fall to the ground when I drop them, this involves grasping (in a sense that need not entail having beliefs) that things are generally drawn towards the ground and that there are some noteworthy exceptions, such as helium filled balloons and birds.

One might think that acquiring such inferential abilities is a lot like acquiring general beliefs about empirical matters, e.g., the belief that things *ceteris paribus* fall to the ground if unsupported. This might suggest that at least the ‘takings’ involved in non-deductive inferences about empirical matters are such beliefs. We already know that this must be false because such beliefs can be acquired via testimony. And when they are acquired via testimony they cannot play the role of ‘takings.’ Rather than simply rejecting this idea, however, I want to point towards a possible explanation of why some ‘takings’ might be closely connected to general empirical beliefs.

The explanation is this: Empirical generalizations often piggyback on, and make explicit, our inferential abilities *via-à-vis* a domain of empirical facts. In order to see this, suppose I can infer “This thing will fall to the ground” from “This thing is unsupported.” I can now reason as follows: “Take an arbitrary object (where this excludes helium filled balloons, birds, etc.). Suppose the thing is unsupported. Therefore, it will fall to the ground. So if something is unsupported, it will fall to the ground.” In this bit of reasoning, I have used my inferential ability to arrive at an empirical generalization. So once I can enjoy the right kind of ‘taking,’ I can easily arrive at the corresponding empirical generalization. Hence, it is unsurprising that the acquisition of such ‘takings’ and the acquisition of general empirical beliefs is closely connected.

To sum up, it is plausible that while perception might play some role in acquiring the ‘takings’ involved in inference, this acquisition is not of the kind that we ordinarily call “learning something by observation.” True, general empirical beliefs are also not acquired by single observations. But there is a plausible explanation of why ‘takings’ and general empirical beliefs are similar in this respect. So it seems that ‘takings’ cannot be acquired through perception in anything like the way that beliefs and judgments can be acquired through perception.

### 3.4 OBJECTIONS, SECOND ROUND

I have argued in the previous chapter that if someone makes an inference, she must ‘take’ her inference to be good. In this chapter, I have criticized the view that this ‘taking’ is a belief or judgment. Not only are the two best worked out versions of this view—those of Valaris and Neta—untenable, but the source of their problems is precisely the claim that the ‘takings’ at issue are beliefs or judgments. For this makes such views vulnerable to the objection that they cannot accommodate the fact that ‘takings’ cannot be acquired in the ways in which we can acquire beliefs and judgments. The most striking example of this is the case of testimony, but it is not the only example. ‘Takings’ cannot, e.g., be acquired by reasoning either.

As illustrated in Figure 2 at the beginning of this chapter, we have now ruled out almost all of the extant accounts of inference. For we have seen that inference requires that the reasoner ‘takes’ her inference to be good, which rules out ‘brutely’ dispositional or causal views (Armstrong, 1968; Winters, 1983; Wright, 2014). This ‘taking,’ however, can neither be an intuition or seeming—which rules out a whole family of popular views (Broome, 2014a, 2013; Dogramaci, 2013; Chudnoff, 2013)—nor can it be a belief or judgment, which rules out another family of views (Valaris, 2014; Neta, 2013; Deutscher, 1969). Given that my claims have these momentous consequences, it is unlikely that they will be accepted without hesitation or resistance. I therefore want to conclude this chapter by looking at some potential worries that may be raised for the arguments I have presented here.

#### 3.4.1 Biting the Bullet

Could my opponent perhaps simply bite the bullet and endorse the view that accepting testimony can enable us to make inferences? Such an opponent might argue that while there might be something funny going on in the case of Hardy and Ramanujan, there seem to be other cases as well. After all, we learn to make certain inferences when we take logic classes, and this might seem to be an effect of being told that these inferences are good.

Let's look at an example. We might be told how we can reason by mathematical induction: "If you are wondering whether all elements in a well-ordered set have a certain property, it is a good inference to reason as follows: First show that the least element has the property, then assume that every element up to the  $n^{th}$  element in the ordering has the property and show that, given this assumption, every element up to  $n+1$  has the property; conclude that every element in the set has the property." Many people who learn to construct proofs by mathematical induction at first don't 'see' why this is a good piece of reasoning. Nevertheless, they can construct proofs by induction, take their teachers word for it that mathematical induction 'works,' and, on this basis, come to believe the result of a particular proof that they have constructed. Doesn't someone who reasons like that make an inference that she 'takes' to be good solely on the basis of testimony?

I don't think that someone who reasons like that has reasoned by mathematical induction. In order to see why, notice that once you have learned to reason by mathematical induction, you don't need to rely on anyone's testimony regarding the goodness of this kind of reasoning in order to gain knowledge by reasoning by induction. The pupil in our example, however, uses what she learns via testimony as an extra premise and, hence, relies on it. This comes out, e.g., in the fact that if we told the pupil in our example that his teacher doesn't actually believe that induction 'works' but merely asserts this for some bizarre reason, our pupil should retract the conclusions that she reached via the kind of reasoning described in the example. If, on the other hand, our pupil has already learned to genuinely reason by induction, she can simply shrug her shoulders and say, "So much the worse for my teacher; I thought she would know better."

The easiest way to see the difference between the two cases is to ask whether the proposition learned via testimony is used as a premise in the inference. Is it one of the reasons on which the belief in the conclusion rests? If so, the reasoning is not a case of mathematical induction. After all, the proposition that mathematical induction works doesn't occur in the schema that sets out the form of an inductive inference—there is just the base case and the induction step.

What goes on in cases like our example is this: The reasoner is told something to the effect that  $C$  can be inferred from  $A$  and  $B$ . The reasoner can satisfy herself that  $A$  and  $B$

hold. Now she reasons as follows: “ $C$  follows from  $A$  and  $B$ . So if  $A$  and  $B$ , then  $C$ . But  $A$  and  $B$ . Therefore,  $C$ .” In our example,  $A$  is the base case and  $B$  is the conditional that results from the induction step. Nowhere in her reasoning does the subject infer  $C$  directly and without further premises from  $A$  and  $B$ . Thus, it might seem that the subject is making the inference that is mentioned in the testimony, but this appearance is misleading.

One potential complication is that practice and repetition can lead a subject from the kind of reasoning just described to an ability to genuinely make the inference that the testimony is about. Learning to set up a proof by induction and blindly following the instructions of our teachers can be an important part of learning to reason by induction. It is at least not obvious that there must be a sharp boundary between the cases in which one is blindly following instructions and the cases in which one can ‘see’ how induction works for oneself. If there are borderline cases, what should we say about the ‘takings’ involved in such cases? As in many borderline cases, I think the best thing we can do is to not make any clear-cut assertions about them. I will leave it to a theory of vagueness to deal with the vagueness of predicates (or properties) like “is reasoning by mathematical induction.”

### 3.4.2 Twofold ‘Takings’

A second worry regarding the arguments in this chapter may be that I haven’t conclusively refuted views on which the ‘taking’ involved in inference is not simple but consists of several elements, one of which may be a belief or judgment. One such view is, e.g., the view that inference requires that the reasoner believes that her inference is good and holds this belief on the basis of an intuition that the inference is good. On this view, ‘takings’ are intuition-based-beliefs.

I already mentioned one problem with views of this kind: they must explain why inferring requires the combination of things the view claims it requires. Why, for example, must the belief that is the ‘taking’ be held on the basis of an intuition? Does the intuition play any role in the inference itself? If so, why is the belief needed? These explanatory burdens give us a *prima facie* reason to be skeptical about such views. Given that we have ruled out almost all extant accounts of inference, however, an opponent might wonder whether such *prima facie*

reasons are strong enough to support still being skeptical in the face of alternative accounts going by the board left and right.

Ultimately, my reason for rejecting such views is this. I think that the ‘taking’ makes an inference into a unified act of reason. As we will see in the next chapter, it does that by giving the inference a particular form. The form of the inference is unified, and this makes the inference a unified exercise of a rational capacity. However, if the ‘taking’ itself is not unified, it cannot give unity to the act it constitutes. This idea relies on my positive account of inference. After all, the argument assumes that the ‘taking’ provides the form of an inference. I will return to this point in the next chapter.

### 3.4.3 Know-How

A third worry may be that I have overlooked the option that the ‘taking’ involved in inference is a case of knowing-how. Gilbert Ryle, e.g., seems to have held a view like that.

A pupil fails to follow an argument. He understands the premisses and he understands the conclusion. But he fails to see that the conclusion follows from the premisses. The teacher [...] tells him that there is an ulterior proposition which he has not considered, namely, that if these premisses are true, the conclusion is true. The pupil understands this and dutifully recites it alongside the premisses, and still fails to see that the conclusion follows [...]. (This is Lewis Carroll’s puzzle in ‘What the Tortoise said to Achilles’. [...]) What has gone wrong? Just this, that knowing how to reason was assumed to be analysable into the knowledge or supposal of some propositions, namely, (1) the special premisses, (2) the conclusion, plus (3) some extra propositions about the implication of the conclusion by the premisses, [...]. Knowing a rule of inference is not possessing a bit of extra information but being able to perform an intelligent operation. Knowing a rule is knowing how. (Ryle, 2009b, pp. 226–227)

Since Ryle sharply distinguishes between knowing-how and knowing-that and, hence, would presumably not say that knowing-how is a matter of having certain beliefs, this passage is not in direct conflict with the conclusion of this chapter, viz. that the relevant kind of ‘taking’ is not a belief or judgment. Intellectualists about knowing-how, however, hold that knowing-how is a species of knowing-that and, hence, a kind of belief (Stanley, 2011; Stanley and Williamson, 2001).<sup>21</sup> So couldn’t an opponent hold that the ‘taking’ involved in inference is a knowing-how that is also a knowing-that?

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<sup>21</sup> The dialectic is complicated at this point because Ryle uses the case in the cited passage to argue for his distinction. Intellectualists argue that this case does not show that knowing-how is not a kind of



Our first reaction will of course be to bring in *Jemeinigkeit* in the usual way. Intellectualists, however, have a response to this kind of objection. Jason Stanley (2011, p. viii) tells us that Fregean “modes of presentation” explain “why learning a fact is not always something one can do by reading a book. Some ways of thinking of objects cannot be acquired by mere description.” The facts that we know, according to Stanley, when we have know-how are the kind of facts that we cannot learn by reading a book, i.e. by testimony. This is because knowing how to *F* is to know, for some way *w* of *F*-ing, that *w* (thought of under a practical mode of presentation) is a way for the subject (thought of under a *de se* mode of presentation) to *F* (Stanley and Williamson, 2001). For the case of inference, this would mean that knowing how to make inferences of a certain kind is to know, for some way *w* of making such inferences, that *w* (thought of under a practical mode of presentation) is a way for me (myself) to make inferences of this kind.

There are at least two minor and one major problems for such a view. Let’s begin with the two minor problems: First, even if we accept the controversial idea of practical modes of presentation, it is not clear that we have practical modes of presentation for acts that are not intentional actions. After all, I cannot think of digesting my food under a practical mode of presentation. It is at best controversial, however, whether inference is an intentional action. Hence, it is unclear whether the account can be applied to inference. Second, it seems that sensory feedback plays a crucial role in learning what is a way of doing something. We try it, we perceive that we failed, we try again, we succeed, we try to figure out how exactly we did it, and with the help of our sensory capacities we eventually manage to home in on a way of getting the thing done. This is not how things go when we first ‘see’ how the premises and the conclusion of an inference hang together. Once you ‘see’ it, no trial-and-error, no practicing, and no adjustment in the light of sensory feedback is required.

The major problem with the kind of view under consideration is a by now familiar one: It cannot explain the Inferential Moorean Phenomenon. After all, it is not absurd to believe, of some way of reasoning, that it (given under a practical mode of presentation) is a way for me (myself) to reason by affirming the consequent and also to believe that affirming the

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knowing-that. They sometimes do this by denying that the ‘taking’ is a case of knowing-how. If they take this line, however, their discussion will be irrelevant for my current topic.

consequent is not a good inference. You might think that this is just a superficial problem of the view that can be fixed by changing the formulation of what knowing-how is. We might, e.g., want to add that you must believe of way  $w$  that it is a good way of getting the thing done. But this problem is not superficial at all. For, notice that if we try to fix this problem by changing the account of knowing-how to something that explains (IMP), this will have consequences for our view about all cases of knowing-how. Analogs of (IMP) will arise for all cases of knowing-how. The adjusted view will imply that it is, e.g., transparently irrational to ride a bicycle in a certain way while also believing that this is not a good way to ride a bicycle. But that is clearly false. Knowing-how simply doesn't as such give rise to Moorean phenomena. Hence, the 'taking' involved in inference is not a case of knowing-how.

### 3.4.4 Another Option?

Another worry may be that I have overlooked an attractive version of the view that the 'taking' involved in inference is a judgment. Could we perhaps hold on to this claim by endorsing a view along the following lines: Inference is simply forming a judgment on the basis of other judgments. However, it is a formal aspect of this act of forming one judgment on the basis of other judgments that one by that very act also judges that the inference is good. The latter judgment is part of the form of the act of judging on the basis of further judgments. It can therefore not be formed on any independent ground. Rather, it is part of what it means that the judgment one forms on the basis of other judgments is self-conscious. There is only one reality here: a judgment formed on the basis of other judgments. And this judgment has as part of its form the judgment that the inference is good, which is not formed on any independent ground at all.<sup>22</sup>

This view has many attractive features. It is an explicit part of this view, e.g., that the 'taking'-judgment is not formed on the basis of anything. Hence, the objection based on the *Jemeinigkeit* of inference doesn't get any grip on the view. Moreover, the view acknowledges

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<sup>22</sup> Perhaps Valaris (2014) ultimately intends to endorse a view like that regarding basic reasoning. After all, he says: "I suggest that we should simply accept that the beliefs about what follows from what involved in basic reasoning are based on no independent grounds. Explicitly reasoning from  $R$  to  $p$  just is, in part, believing that  $p$  follows from  $R$ " (Valaris, 2014, pp. 117–118). And perhaps Sebastian Rödl (2013) holds such a view.

that inference involves a ‘taking’ one’s inference to be good. So the IMA-considerations don’t speak against such a view. Furthermore, the view gives us at least a hint regarding the role of the ‘taking’ in inference: it is part of the form of the inference. In particular, it is part of the self-consciousness that is a formal aspect of inference.

As will become clear below, my own view is in many respects similar to such a view.<sup>23</sup> However, I don’t see why it must be part of such a view that the ‘taking’ is a judgment. In fact, on such a view, the ‘taking’ cannot be held on independent grounds; it cannot be formed on the basis of testimony or reasoning; it isn’t a distinct reality from the inference; rather, it is a formal aspect of the inference, i.e. of another judgment (formed on the basis of further judgments). None of this is what we would ordinarily expect from a judgment. Thus, the question arises in what respect the ‘taking’ is actually like a judgment, according to this view. After all, if something is so unlike most judgments in many respects, we surely need some positive indication for the thing being a judgment, in order to claim that it is a judgment. I can find no such positive indication.<sup>24</sup> Be that as it may, once we agree that ‘takings’ have all the features just listed, I am no longer sure whether any remaining disagreement regarding whether ‘takings’ are judgments is actually a substantive—rather than a merely verbal—disagreement. So I am happy to rest my case here and turn to my positive view.<sup>25</sup>

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<sup>23</sup> Another view in the vicinity of my own view is the one due to Ralph Wedgwood (2012; 2015).

<sup>24</sup> That is, no positive indication other than the fact that the ‘taking’ transparently commits the reasoner to the goodness of her inference. But that is much too weak a basis for the claim that the ‘taking’ is a judgment.

<sup>25</sup> I would like to point out one general and unrelated dissatisfaction I feel with respect to the view under consideration. The idea that inference is always the act of forming one judgment on the basis of other judgments strikes me as wrong. First of all, this view seems to rule out practical inferences, unless the conclusions of practical inferences are judgments. Second, the view rules out inferences under suppositions, in so far as accepting something under a supposition is not a judgment. However, inference under supposition and inference that issues in judgments seems to be the same kind of act. After all, we can sometimes even be unsure about whether our premises are things we believe or merely suppositions, e.g., when we lose track of our suppositions. Third, we can infer things we already believe from premises that we don’t think are adequate grounds for judging the conclusion. This happens, e.g., when we successfully try to infer something that we want to explain from other things we believe in order to see whether they provide an explanation of the first thing. In such a case, we might think that the only adequate ground for believing the explanandum is, e.g., that we observed it.

## 4.0 THE FORCE ACCOUNT OF INFERENCE

I have argued in the previous two chapters that if someone makes an inference, she ‘takes’ her inference to be good. And this ‘taking’ is neither an intuition or seeming nor a belief or judgment. So far, my discussion has been mostly negative. I have argued that none of the extant accounts of inference is entirely satisfactory. The reader will have wondered how an account of inference can get around all the problems I have raised for the various proposals in the literature. What is the solution to all these problems? What is the right account of inference? In this chapter, I shall try to answer these questions by laying out my positive proposal.

My proposal will be rough and sketchy at various places. Nevertheless, I hope it is a step in the right direction. My general strategy will be to bring out parallels between inferring and other manifestations of our rational capacities. Ultimately, I want to throw light on the act of inferring by placing it in a general framework for thinking about acts of reason. I will not try to provide a reductive account of inference. The idea that we can understand inference as a combination or sequence of more familiar acts, attitudes, and relations between them seems to me too ambitious to be fruitful. Rather, I want to bring out parallels, draw analogies, and situate inference in a wider context. I hope that this exercise will be illuminating enough to constitute genuine philosophical progress.

I call the view I endorse the “Force Account of Inference.” On this view, inference is understood, primarily, by analogy to judgment. We can express judgments by making assertions. In an assertion, we can distinguish the content that is asserted from the assertoric force with which the content is put forward. The judgment that is expressed in an assertion can similarly be analyzed into a content and a force, which we may call “doxastic force” and which is characteristic of judgment. Just as assertoric force is what makes a linguistic act,

*inter alia*, an instance of putting something forward as true, so doxastic force is what makes a mental act, *inter alia*, an instance of ‘taking’ something to be true. Here we encounter the idea of ‘taking’ again but this time in the context of judging. If someone judges that *P*, she ‘takes’ it to be true that *P*. In fact, judging that *P* is nothing other than ‘taking’ *P* to be true (in a particular way). But this time we already know what this means: judging that *P* is, as I shall put it, attaching doxastic force to the content *P*.

This can be used as a model for thinking about inference. Now, inferences differ from judgments, among other things, in that they don’t have a single content to which we are related in enjoying the act. In inferences, we don’t find a single content to which we relate in a certain way. Rather, the contents involved in inferences are structures of several contents, namely the premises and the conclusion. I will call these structures of contents “arguments.” To a first approximation we can think of arguments as ordered pairs of a set of premises and a conclusion. So arguments are very different from the contents of judgments, which are typically propositions. Consequently, the force involved in inference must be different from the force involved in judgment. Let’s call the force involved in inference “inferential force.” Now, if judgments are to be understood as acts of attaching doxastic force to a judgeable content and we treat judgment and inference in a parallel fashion, we arrive at the following claim about inference.

**FORCE ACCOUNT**      Inferring is the act of attaching inferential force to an argument.

This is the core claim of the account of inference laid out in this chapter. Now, this can look like a textbook example of explaining *obscurum per obscurius*. So the task of this chapter will be to unpack the Force Account in such a way that it is illuminating, helpful, and explanatory.

I will approach this task by first getting clearer about the force involved in judging (Section 4.1). I suggest that we understand judgment as the act of attaching doxastic force to a judgeable content. Here doxastic force has three functions: (i) It determines the norms that govern the act (i.e. judgment). (ii) It makes the act one unified act of a particular kind, namely an act of judging with a particular content. (iii) It does this by the thinker reflectively endorsing the thereby constituted judgment as living up to the norms that govern

it. I then transfer these three functions to the case of inferential force (Section 4.2). Attaching inferential force to an argument is an act in which the thinker reflectively endorses the thereby constituted inference as living up to the norms that govern it, and it thereby makes the act a unified inference of a particular kind, so that the norms in question in fact apply.

In sections 4.3 and 4.4, I will spell this out in more detail. Section 4.3 offers an account of how inferential force interacts with other forces, such as doxastic force. The crucial result will be that inference is an act in which our attitude toward the conclusion of the inference is settled. According to the Force Account this happens because attaching inferential force makes it impossible for the agent to hold certain combinations of attitudes toward the contents that figure in the argument. In Section 4.4, I explain in what sense inference is active and self-conscious, according to the Force Account.

There are two crucial criteria for whether I succeed in my task for this chapter: First, the Force Account must be unpacked in such a way that the account explains the Inferential Moorean Phenomenon and the *Jemeinigkeit* of inference. Second, the account must be presented in a clear enough way to enable us to apply the account in domains where an understanding of inference is needed. I will show that the first criterion is met in Section 4.5.

I will end by explaining why the Force Account does not succumb to the Sophistication Objection (Section 4.6). The applications of the account in epistemology and practical philosophy in later chapters will serve as a demonstration that the second criterion is also fulfilled.

## 4.1 DOXASTIC FORCE

If we want to understand the ‘taking’ involved in inference by analogy to the force present in judgment, we’d better have some grip on this notion of *force*, i.e. what I call “doxastic force.” In this section, I will offer an account of doxastic force that we can use as a model for inferential force. According to this account, doxastic force has three intertwined functions: (i) It determines the norms that apply to the act of attaching it. (ii) It gives the act of attaching it its form, in a broadly Aristotelian sense—it unifies it and determines its nature.

(iii) It is attached in a reflective endorsement of the thereby constituted act as living up to the norms that govern it. I shall bring out that all three of these aspects or functions are already implicitly present in Frege’s ideas about judgment and assertoric force.

#### 4.1.1 Essential Norms

When we ask what is meant by “force,” we find ourselves in a peculiar situation. On the one hand, Frege’s force-content-distinction is almost universally accepted—Irad Kimhi (ms), Peter Hanks (2007) and a few others being notable exceptions. On the other hand, there are no worked-out standard theories of force. Of course, there is a discussion of force within speech act theory (Searle 1969; Recanati 2013) and there are theories of assertion (e.g. Brandom 1983; Williamson 1996; Pagin 2011; MacFarlane 2011). With such a theory in hand, we can say that a content is put forward with assertoric force by a speaker just in case the speaker asserts it. We can then understand doxastic force as that feature of judgments that is expressed by the assertoric force of sincere assertions.<sup>1</sup>

MacFarlane (2011) distinguishes four broad classes of accounts of assertion. They are characterized by the following four theses respectively:

1. To assert is to express an attitude.
2. To assert is to make a move defined by its constitutive rules.
3. To assert is to propose to add information to the conversational common ground.
4. To assert is to undertake a commitment.

It seems to me that the first and the third approach aren’t very helpful at our point in the discussion. The first one just brings us back to the question: What is judging? And the third one uses the notion of a conversational common ground, which cannot easily be transferred to the mental act of judging. So let’s put these ideas to one side.

The insight that is common to the second and the fourth approach is that assertion is something that is essentially subject to certain norms. While the constitutive rule account focuses on the norms for when an assertion is appropriate or permitted, the commitment

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<sup>1</sup> Peter Geach (1957) has presented a detailed account of how judgment can be understood on the model of assertion. What I say about judgment is compatible with Geach’s account, and I think something along the lines of what Geach says is right.

account focuses on how making an assertion changes what is appropriate, permitted, or required.

If we take the idea that assertions are essentially governed by norms on board, what does this tell us about assertoric force? Obviously, we must say that to put something forward with assertoric force is to put something forward in such a way that this is essentially governed by certain norms. These norms are characteristic of assertion. Putting something forward such that this is governed by these norms is a necessary—and on ambitious views also sufficient—condition for putting something forward with assertoric force.

Now, if doxastic force is to be understood by analogy to assertoric force, it should have analogous properties. We thus arrive at the following claim:

NORM-J     If someone attaches doxastic force to a content, this act is necessarily governed by some norms, which are characteristic of judging.

This is the first feature of doxastic force that I want to point out. Attaching doxastic force is necessarily governed by norms that characterize the act constituted by the attaching of doxastic force. What are the norms that are governing judgment? Norms of truth, justification, and knowledge are some obvious candidates that spring to mind.

Here I have to digress for a moment: The same norms come to mind when we ask what norms are governing belief. This is as it should be, I think, because the difference between judgment and belief is a difference in temporal structure and not a difference in the force involved in them. Believing that  $P$  is something that we do over a period of time, while judging that  $P$  is something that we do at a particular point in time. Typically, judging that  $P$  marks the onset of a belief that  $P$ . We could express this by saying that judging is the ‘dynamic’ act of attaching doxastic force to a content, while believing is the ‘static’ act of attaching doxastic force to a content. So there isn’t a problem here for the view I am developing. However, we can see from the case of judgment and belief that being governed by the norms that govern judgment is not sufficient for being a judgment. Similar issues will arise for inference.



NORM-J is a plausible idea that can be fleshed out in many different ways, and I will take it on board.<sup>2</sup> However, the idea is a very abstract one. In order to make it more concrete, we would have to spell out which norms are governing judgments *qua* judgments. Is there necessarily something wrong with judgments if they are false? Or if they are not justified? Or if they are not knowledge? Moreover, we would have to spell out what exactly it means that these norms apply. Are we violating a constraint of rationality when we are violating such norms? Are we not doing what we have most reason to do if we violate such norms? These are all formidable questions. However, a systematic treatment of these questions is beyond the scope of this dissertation.

#### 4.1.2 The Form of Judging

Realizing that acts of attaching doxastic force are necessarily governed by norms characteristic of judging is a step in the right direction. It is not clear, however, why this realization should lead us to a distinction between force and content. After all, the act of selling something may necessarily be governed by characteristic norms, but this presumably does not mean that we should distinguish between the force and the content of acts of selling. So why should we distinguish force and content when it comes to assertions and judgments?

Frege adamantly defends the need for a judgment stroke, with which doxastic force is expressed, on the basis that it is tracking an “actual difference” (*sachlichen Unterschied*), namely the difference between an asserted and an unasserted content (Frege 1976, p. 186). This difference shows up in at least two ways. First, assertoric force is not the only force with which we can put forward a content. The same content can, e.g., also occur as the content of a yes-no question or in an order. So force and content can be varied—to a certain degree—independently. Second, force usually attaches only to the entire content of an act; it does not attach to embedded parts of the content. When I assert a conditional, e.g., I do not thereby assert the antecedent. That is why the judgment stroke can serve to give a sentence of Begriffsschrift a kind of completeness or closedness, which Frege thinks, e.g., the sentences of Peano’s formal language are lacking (see Frege 1967, p. 232).

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<sup>2</sup> Some think that judgment and belief are not normative. I don’t want to be bogged down by this debate here. I offer some discussion of these issues elsewhere (Hlobil, 2015).

Transposing the discussion again from talk about assertions to talk about judgments, Frege’s idea is that to judge something is to relate to one particular content as a whole in one particular way, among many. That judging is one way among many of relating to a content comes out in the fact that we can not only judge that *P* but also wonder whether *P*, suppose that *P*, or doubt whether *P*. The fact that judging relates us to one particular content can be seen from the fact that when we judge that *if P, then Q*, we don’t thereby judge that *P*.

Doxastic force is doing two things. First, it determines the act the subject is enjoying to be an act of judging or believing—as opposed to an act of wondering, supposing, doubting, or the like. Second, doxastic force is singling out a particular content as a whole or unity relative to the act of judging. *The* single and complete content of the judgment is that to which doxastic force is attached.<sup>3</sup> In other words, doxastic force singles out a content as the unity to which it attaches. Now, our act of judging is *one* in virtue of being the view of a particular subject (at a particular time) regarding *one* content. After all, we usually individuate judgments by their content (as well as their subject and time of occurrence). In this sense, it is doxastic force that makes a judgment *one* judgment that is distinct from other judgments.

So doxastic force is making an act of judging one particular unified act, and it is determining what kind of act it is. Finding something that has these two functions should remind any reader of Aristotle of something. After all, “for Aristotle, form does (at least) two jobs. One is to explain the unity of a substance; the other is to answer the question of what something is” (Priest, 2014, p. 42). As Aristotle tells us in his dictionary, something is one in a strong sense if it has a single form.

[I]n one sense we call anything whatever “one” if it is quantitative and continuous; and in another sense we say that it is not “one” unless it is a whole of some kind, i.e. unless it is one in form (e.g., if we saw the parts of a shoe put together anyhow, we should not say that they were one—except in virtue of their continuity; but only if they were so put together as to be a shoe, and to possess already some one form). (Aristotle, *Meta.* Δ, 1016b)

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<sup>3</sup> For the sake of simplicity, I am here refraining from discussing mental analogs of linguistic phenomena like presupposition, binary constructions, implicatures and the like. I don’t think looking at such phenomena, if they exist, would change anything of substance.

And later on he says, “by ‘form’ I mean the essence [the what-it-is-to-be, τὸ τί ᾗν εἶναι] of each thing” (Aristotle, *Meta. Z*, 1032b, 1035b). So if something has a certain form it is thereby *one* thing of a particular kind. There are, of course, hundreds of interesting and controversial issues bound up with Aristotle’s notions of form and essence, but let’s not get bogged down by Aristotle exegesis and press on.

In a broadly Aristotelian spirit, I shall say that something deserves to be called a “form” if in virtue of having it some things are distinct wholes of a particular kind. As we have seen, transposing Frege’s notion of force to the mental realm yields a notion of doxastic force such that in virtue of the attaching of doxastic force the act is a unified whole and an instance of judging (or believing). Hence, the form of judging is to be an act of attaching doxastic force (of the temporal structure that distinguishes it from believing). Let’s formulate this result in a thesis.

FORM-J     Attaching doxastic force (with the right temporal structure) is the form of the act of judging, in that it (a) makes it the case that these acts are acts of judging and (b) makes it the case that these acts are unified wholes.

Starting with Frege’s two motivations for his force-content-distinction and looking over our shoulder to Aristotle, we have arrived at the view that doxastic force gives judgments their form.

One natural worry regarding this result is that we must now think of content as a kind of ‘stuff’ that is brought into a certain unified shape through mental acts of judging. No such conclusion follows. We can think of content as a kind of matter in so far as it individuates judgments. But we don’t have to think of it as a kind of ‘stuff’ acted upon by doxastic force. The contents of judgments are abstractions, and doxastic force unifies a content only in that it singles out a content to which it attaches as a whole.

A second worry might be that if we think of content as matter, it may seem that we can no longer talk about the form of a content. This is not so. Form and matter are relative notions. The fact that clay is the matter out of which a pot is made does not mean that clay itself cannot have a form and a matter.

### 4.1.3 The Reflexive Nature of Force

So far, I have suggested that doxastic force is that which makes something one act of a particular kind—namely judging or believing—and thereby makes it the case that the norms that are characteristic for acts of this kind apply to the act at issue. The same structure, however, can be found in cases that have nothing to do with acts of attaching force—in particular, in living things. It is plausible, e.g., that something is one specimen of a particular biological species in virtue of having a certain form, and thereby characteristic standards of health and flourishing apply to the thing (see [Thompson, 2008](#)). Something similar can be said about artifacts. So how does doxastic force—the form of judging—differ from biological forms and the forms of artifacts?

A remark of Kant’s may suggest a way forward: “All natural things act in accordance with laws. Only rational beings have the ability to act in accordance with representations of laws [...]” ([Kant](#), AA 4, p. 412). For our case, we can assume that “acting in accordance with particular laws” translates into “having a particular form.” So, at an abstract level, the idea is that rational creatures can take on a certain form in virtue of representing this form; I can judge that  $P$  by representing myself as judging correctly that  $P$ .<sup>4</sup> If we take Kant’s idea with a grain of salt and spin it in the right way, it points the way to the insight that doxastic force has what I shall call a “reflexive nature.” To see what I mean, it will be helpful to return to Frege again.

Frege notoriously holds that “one judges by acknowledging (*anerkennen*) a thought as true” ([Frege 1967](#), p. 379n15); that is what is expressed by the judgment stroke. Hence, we can read “acknowledging as true” as one of Frege’s glosses on what I have been calling “attaching doxastic force.” Unfortunately, there is no consensus on what Frege means by “acknowledging.”<sup>5</sup> There are, however, a couple of things that are clear: First, Frege stresses

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<sup>4</sup> Kant says: “A judgment is the *representation of the unity* of the consciousness of various representations [...] insofar as they *constitute a concept*” ([Kant](#), AA 9, p. 101, my translation and emphasis). And in a letter to Beck, he writes that the difference between the combination of representations in a concept and the combination of representations in a judgment is that “in the first case, the concept is thought of as determined, whereas in the second case, the *act of determining* the concepts *is thought*” ([Kant](#), AA 11, p. 347, my translation and emphasis). Kant is clear that this “constituting a concept” and “determining” amount to representing the judgment as objectively valid, i.e. as correct.

<sup>5</sup> Recently, Christoph Pfisterer ([2013](#)), Mark Textor ([2010](#)), Michael Kremer ([2000](#)) and Dirk Greimann ([2000](#)) have presented interesting discussions of this issue.

the active character of the acknowledgment. Right after the sentence just quoted, e.g., Frege calls it a “*Tat*.” Second, “acknowledging as true” characterizes judging from the perspective of the agent; the judgment ‘appears’ true from the perspective of the agent. Third, Frege doesn’t want to say that we judge that *P* by *judging* that *P* is true, i.e., Frege is not using “acknowledging” as synonymous with “judging.” After all, Frege thinks that the (Fregean) thought that *P* and the (Fregean) thought that *P* is true are identical (Frege, 1979, p. 251). So Frege’s gloss would reduce to the unhelpful statement that we judge that *P* by judging that *P*. It is worth expanding on the third of these points.

Despite his thesis that the thought that *P* is true and the thought that *P* are identical, Frege goes on to say:

[T]he laws of logic are nothing other than an unfolding of the content of the word “true.” Anyone who has failed to grasp the meaning of this word—what marks it off from others—cannot attain to any clear idea of what the task of logic is. (Frege, 1979, p. 3)

How can it be so important to grasp the meaning of a word whose sense “is such that it does not make any essential contribution” (Frege, 1979, p. 251) to the content of sentences in which the word occurs? The answer is that what Frege is trying to get at is not a bit of content but a force.

If I assert “it is true that sea-water is salty,” I assert the same thing as if I assert “sea-water is salty.” This enables us to recognize that the assertion is not to be found in the word “true,” but in the assertoric force with which the sentence is uttered. [...] So the word “true” seems to make the impossible possible: it allows what corresponds to the assertoric force to assume the form of a contribution to the thought. And although this attempt miscarries, or rather through the very fact that it miscarries it indicates what is characteristic of logic. [...] “[T]rue” only makes an abortive attempt to indicate the essence of logic, since what logic is really concerned with is not contained in the word “true” at all but in the assertoric force with which a sentence is uttered. [...] But no word, or part of a sentence, corresponds to this [...]. (Frege, 1979, pp. 251–52, translation altered)

This makes it clear that Frege’s “acknowledging as true” is not a matter of having a certain attitude toward the content that such-and-such is true. Attaching doxastic force is not another judgment or belief in addition to the judgment constituted by the act of attaching doxastic force. However, Frege thinks it is crucial that we can let it (somewhat misleadingly) appear that way. For him, the word “true” is “indispensable” because it “seems to make the

impossible possible” (Frege, 1979, p. 252). We attach doxastic force by endorsing something as true without this being a case of judging or believing that the thing is true.<sup>6</sup>

Why is it so important that attaching doxastic force is something that can look like a judgment to the effect that one’s thereby constituted (ground-level) judgment is true without actually being such a (higher-level) judgment? It cannot be another judgment because that would mean that the difference between judging and other acts is a matter of difference in content. If we explain what it is to judge that  $P$ , in contrast to doubting whether  $P$ , by saying that it is to judge that  $Q_1$ , in contrast to judging that  $Q_2$ , we make it seem as if the difference between judging and doubting is a matter of the difference between the contents  $Q_1$  and  $Q_2$ . But that is false.

This leaves us with the question why attaching doxastic force must look like a judgment to the effect that one’s thereby constituted judgment is correct. It is helpful, at this point, to turn to Aquinas. A version of the idea that we just saw in Frege is also at work in Aquinas.<sup>7</sup> For Aquinas, in a true judgment, one achieves conformity of one’s intellect with how things are. In order to know truths, however, this conformity must not only hold, it must also be appreciated by the agent. Indeed, Aquinas thinks that judging is nothing other than this appreciation of the truth of one’s judgment.

To know this relationship of conformity is nothing other than to judge [*nihil est aliud quam iudicare*] that a thing is such or is not, [...]. (Aquinas, *Commentary on De Interpretatione*, Lesson 3, section 9)

Since Aquinas holds that the appreciation of the truth of one’s judgment is “nothing other than” the judgment itself, this appreciation cannot be a separate judgment over and above the judgment constituted by it. Rather, for Aquinas, as for Frege, one judges *by* ‘taking’ one’s judgment to be correct.<sup>8</sup>

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<sup>6</sup> Given Frege’s identity claim we should actually say: “without this being a judgment that the thing is true—other than the judgment thereby constituted (whose content is identical to the content that this content is true).”

<sup>7</sup> Here I am drawing heavily on Ursula Coope’s (2013) wonderful paper “Aquinas on Judgment and the Active Power of Reason.”

<sup>8</sup> I am ignoring here for the moment that these two philosophers disagree on what the primary bearers of truth are. For Frege we acknowledge the truth of a thought, i.e. something in the third realm, while for Aquinas we acknowledge the truth of a mental act, namely the judgment.

Now, Aquinas brings out a helpful contrast. While acts of sensibility can be true, they are not constituted by an endorsement of their own correctness.

Truth is both in intellect and in sense, but not in the same way. It is in intellect as a consequence of the act of the intellect and as known by the intellect. [...] And truth is known by the intellect in view of the fact that the intellect reflects upon its own act [*intellectus reflectitur supra actum suum*]*—not merely as knowing its own act, but as knowing the proportion of its act to the thing.* (Aquinas, *De veritate*, q1, a9)

While judgments are formed by endorsing the judgment as correct, having a sense impression is not enjoyed by endorsing the sense impression as correct. That is why it is absurd to form a judgment while believing that the judgment is not correct, but it is not absurd to have a sense impression while believing that the sense impression is not correct. In this sense, judging is reflective. A judgment, as it were, evaluates itself positively in light of the norms that govern judging. This reflective endorsement, however, is not a separate act but a formal aspect of the judgment itself. It is not a matter of having another attitude toward the content that the judgment is correct. Rather, this endorsement is simply the act of attaching doxastic force. We thus arrive at the following claim.

REFL-J      Attaching doxastic force is done by reflectively endorsing the thereby constituted act as living up to the norms that essentially govern judgments—in a manner that is not the manner of belief or judgment.

One might wonder whether “attaching doxastic force” is more than a mere label for this ‘mysterious’ act of reflective endorsement. I am not sure how much deeper an analysis can go at this point. However, once we have the contrast to acts of sensibility firmly in view, it is virtually impossible to think that the phenomenon thus labeled isn’t real.

We now have a better grip on what it is to attach doxastic force to a content. On the view I am recommending, attaching doxastic force is something that determines the form of the thereby constituted act. This means that the act is thereby unified in the sense of having a particular content, and the act is thereby an act of judging. The latter implies that the act is governed by the norms that govern judgments *qua* judgments. And all of this is done by reflectively endorsing the act as living up to those norms, where this endorsement is not another judgment or belief. We can summarize the view as follows:

DOX-F      Attaching doxastic force is the act of reflectively endorsing—in a manner that is not the manner of belief or judgment—the thereby constituted act (with the thereby singled out content) as living up to the norms that essentially govern judgments and thereby making it the case that the act is a judgment (and thus the norms apply).

Notice that we don't need to restrict ourselves to the norm of truth, as Frege and Aquinas tend to do. It is plausible that truth is not the only norm of judgment, and it is at best unclear whether the other norms can be derived from a truth-norm. My view leaves room for different norms by simply talking about the norms that govern judgments *qua* judgments. Notice also that the view can accommodate the fact that beliefs and judgments seem to be governed by the same norms and differ merely in temporal structure. For we can introduce corresponding differences in the temporal structure of the reflective endorsement.

With this clarified notion of doxastic force in hand we can return to our main topic: inference. Let's transfer our results from the case of judging to the case of inferring. On the view I am recommending, inferring is the act of attaching inferential force to an argument.

## 4.2 INFERENCE FORCE

We now have a better sense of what attaching doxastic force is. I want to suggest that this gives us a model on which to understand inference. Just as judging can be understood as the act of attaching doxastic force, so inference can be understood as the act of attaching inferential force (or better: an inferential force, for as we shall see there are several inferential forces). Many of the points made in the previous section carry over to inference in a straightforward way. However, there are also important differences. In this section, I shall explain how and to what extent the account of judgment can be transferred to the case of inference. If we understand inference on the model of judgment, however, the question arises how these two acts—and similar acts—relate to each other. This will be the question of the next section.



In the previous section, we have seen that the idea of doxastic force comprises three central elements: (i) the idea that the acts constituted by the act of attaching force are essentially governed by certain norms, (ii) the idea that the force determines the form of the act thus constituted, and (iii) that the act of attaching force is performed by reflectively endorsing the thereby constituted act as living up to the norms that govern it. I will look at these three ideas in the context of inference.

Here is the plan for this section: I will begin by explaining what I mean by “argument” (Subsection 4.2.1). Next I will argue that there are different kinds of inference and that this is because there are different norms governing different inferences (Subsection 4.2.2). Realizing this allows us to say that inferences are essentially governed by norms. The sets of norms that govern different kinds of inference correspond to different inferential forces. I then suggest that we should think of these inferential forces as determining the form of the inferences in which they are attached to arguments (Subsection 4.2.3). I end the section with the idea that the act of attaching an inferential force is an act of reflectively endorsing the thereby constituted inference as living up to the norms that essentially govern this kind of inference (Subsection 4.2.4).

The upshot of all this will be that the inferential force involved in an inference gives the inference its form and, thereby, makes it the case that particular norms govern the inference, and the thinker attaches an inferential force to a content by reflectively endorsing the inference as living up to the norms that, thereby, govern it. None of this will amount to a reductive explanation, or definition, or analysis of inferential force; rather, the idea is to understand what inferential force is by understanding its role in inference. This understanding will be deepened in subsequent sections and chapters.

In order to understand the points I am going to make, we will first need to think about what it is that we are attaching inferential force to, which are the things I call “arguments.”

### 4.2.1 Arguments

I claim that just as judging is attaching doxastic force to a judgeable content, so inference is attaching an inferential force to something. But what stands to an inferential force as

a judgeable content stands to doxastic force? What is it that we are attaching inferential force to? As already intimated in the introduction to this chapter, I shall call the things in question “arguments.” An argument is the structure of contents that is made up of the premises and the conclusion of an inference. To a first approximation, we can think of arguments as ordered pairs of a set of contents and a content.<sup>9</sup> As will become clear in the next section, the conclusion of the argument need not be the conclusion of the inference. This is because we can come to reject one of the premises of an argument as the result of an inference. Let us ignore this complication for the moment, however, in order to get the idea clearly into view.

An argument is a structure of contents. The contents that make up this structure are the contents of the premise- and conclusion-attitudes of the inference, i.e. the premises and the conclusion. Now, it might happen that some of the contents that are the premises and the conclusion are not propositions. According to David Lewis (1979), e.g., the contents of *de se* beliefs—and ultimately of all beliefs—are not propositions. But *de se* beliefs can occur as premises and conclusions in inferences. Similarly, the contents of intentions may not be propositions. But according to many, intentions can be the conclusions of practical inferences. Since I want to keep an open mind about these questions, I will not say that an argument is an ordered pair of a set of propositions and a proposition. What matters is that the contents that make up an argument are such that they can be the contents of attitudes that occur in inferences, such as beliefs, suppositions, intentions, perhaps acts of wondering and doubting, etc.

A difficult question arises at this point: Should the thing to which inferential force attaches include the attitudes we have towards the premises (and perhaps even the conclusion)? John Broome says something on a related topic that suggests a positive answer.

An intention to visit Venice and a belief that you will visit Venice obviously participate in your reasoning in different ways. For instance, an intention to visit Venice might be a premise-attitude in instrumental reasoning that would lead you to intend to buy a ticket to Venice. [...] Your belief could not play the same role in instrumental reasoning as an intention, and bring you to intend to buy a ticket. Yet the intention and the belief have

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<sup>9</sup> This assumes that the number of “copies” of premises and the order of the premises doesn’t matter. These are assumptions we might want to reject if we think that a contraction-free logic is relevant for the norms governing a particular kind of inference. Or if we want to adopt some dynamic semantics for the premises. For the sake of simplicity, I shall ignore such complications here.

the same content. It follows that, when you apply a rule in the course of reasoning with an attitude, the rule must take account of the attitude's type as well as its content. This means that the rule must be defined on the attitudes' contents and types taken together. That is to say, it must be defined on pairs, each consisting of a content and a type of attitude. (Broome, 2013, p. 251)

Broome calls these pairs “marked contents” and writes the rules he has in mind in the following way:

From  $\langle p; \text{intention} \rangle$  and  $\langle \text{If } p \text{ then } q; \text{belief} \rangle$  to derive  $\langle q; \text{intention} \rangle$ .  
 [...]
 From  $\langle p; \text{belief} \rangle$  and  $\langle \text{If } p \text{ then } q; \text{belief} \rangle$  to derive  $\langle q; \text{belief} \rangle$ . (Broome, 2013, p. 252)

I agree with Broome that different attitudes—or, as I would say, the different forces that attach to the premises and the conclusion—make a difference for whether an inference is good. Whether or not an inference is good, however, need not be settled by the thing to which inferential force is attached. Compare the case of judgment: the content of a judgment does not settle whether the judgment lives up to the norms that govern judgments. We might know what the content is without knowing whether the judgment is justified, for instance. So Broome's considerations don't establish that arguments must be made up of “marked contents” rather than unmarked contents. They show that the attitudes toward the premises of one's inference must play a role in the ability to make good inferences. We must get the interaction between inferential forces and the attitudes toward premises and conclusion right. This will be the topic of the next section. For now, I will simply say that arguments are structures of unmarked contents, namely ordered pairs of sets of contents and contents.

#### 4.2.2 Norms and Kinds of Inference

Our first idea regarding doxastic force was that attaching doxastic force is something that is essentially governed by particular norms, such as a truth-norm or a norm of justification. This idea carries over to inference. Just as judgments are essentially governed by norms, so inferences are essentially governed by norms. There are good inferences and bad ones; some inferences are good pieces of reasoning and others are not. If the question whether

something is a good piece of reasoning does not apply to an act, then the act cannot be an inference.

I hold that there are different kinds of inference and that kinds of inference are individuated by the sets of norms that govern them as the things they are.<sup>10</sup> In other words, there is a particular set of norms that essentially govern all and only inferences in a particular class just in case this class of inferences forms a kind of inference. We can now look back at NORM-J and transfer it to the case of inference. This yields the following principle.

NORM-I     If someone attaches a particular kind of inferential force to an argument, this act is necessarily governed by some norms, which are characteristic of the corresponding kind of inference.

This claim is important because I will suggest below that inferential force determines what kind of act is performed in attaching it (modulo temporal structure). So if there are different kinds of inference, there must be different kinds of inferential force. If we suppose, e.g., that there are inferences of kind  $x$  and inferences of kind  $y$ , then there must be an inferential force of kind  $x'$  and an inferential force of kind  $y'$ . And making, say, an inference of kind  $x$  is the act of attaching inferential force of kind  $x'$  to an argument, and analogously for other inferential forces. But for now, let's just think about norms and kinds of inference.

We surely want to know more about the particular norms that govern different kinds of inference. As this topic will be with us for some time, I will here merely begin to address this issue. I will start with some general remarks.

First of all, when something is governed by norms that apply to it *qua* the thing it is, then there are usually very few ways for the thing to be an ideal exemplar of its kind but many ways of being less than ideal.<sup>11</sup> So we should expect this to be so for inference as well. And indeed inferences can be bad in many ways.

We must not, however, confuse ways in which an inference can be bad *qua* inference with other ways in which an inference can be bad. An inference is bad in such other ways, e.g., when it is made at an inappropriate time, or place, or while one has better things to do, etc. An inference that is bad in these ways is not a bad piece of reasoning. Furthermore,

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<sup>10</sup> I already mentioned this idea back in Section 2.1.3.

<sup>11</sup> See Aristotle, *EN*, 1106b35.

inferences can be bad by serving bad purposes without being bad *qua* inference. Someone might, e.g., infer, from some information he possesses, how much money someone else has only in order to steal it from her. The theoretical inference of such a person need not be bad *qua* inference. We are interested in none of these kinds of badness; we are interested in cases where an inference is bad *qua* inference.

Once we exclude badness of an inference *qua* something other than an inference, we encounter two broad categories of badness of an inference *qua* inference. First, an inference can be bad by failing to be a full-fledged inference. The inference may, e.g., not be the manifestation of a stable ability to make inferences of this kind, or it might be a borderline case because the reasoner is currently acquiring the ability to make such inferences. One's intellect may be fragmented so that one is making the inference in just "one compartment" of one's intellect, etc. These are kinds of badness that apply to the inference in virtue of being an inference at all, not in virtue of being a particular kind of inference. So such norms are not the kind of norms that NORM-I talks about.

The second broad category is the badness of an inference *qua* the particular kind of inference it is. We are interested in the norms that underwrite this kind of badness. An abstract and crude way of capturing these norms is to say that the premises should provide reasons for the conclusion. Supposing that the reasoner is rational in her attitudes towards the premises, then she will be rational in holding the conclusion attitude—if it is based on the premise attitudes. However, there are different relations of "being a reason for" or "making rational." If NORM-I is correct, these different "reason for" relations map onto different kinds of inference.

In order to see that there are indeed different kinds of inference, in the sense of inferences that are governed by different sets of norms, notice that sometimes an inference can be shown to be bad by showing that even if all the premises are correct, it is possible that the conclusion is not correct. This kind of objection, however, does not show that inferences like the following are not good: "The sun always rose in the morning in the past, and nothing of relevance seems to have changed. So the sun will rise tomorrow morning." Or: "Her car is in the driveway, and she usually takes the car when she goes out. So she must be home." Of course, someone might argue that these inferences contain hidden premises or that these

are not genuine inferences, but such moves are very implausible. We can rationally come to believe things through such inferences, and we don't need to believe all the things we would need to use as premises in order to make such arguments deductively valid or necessarily truth-preserving. So, there must be different kinds of inference, governed by different norms.

We are now facing the question what kinds of inference there are. I can't do full justice to the topic of what kinds of inference there are here. I can, however, make some suggestions and give a general method for approaching the question. Let's start with the general method: The question what kinds of inference there are reduces to the question what sets of norms there are such that each set of norms is governing some inferences *qua* the inferences they are. There are two kinds of intuitive verdicts on which we can draw when we try to answer this question. First, we can draw on our intuitions regarding Inferential Moorean Absurdities. If it is absurd to make a particular inference while believing that such-and-such is not the case (and not because what is believed is incompatible with the premises or the conclusion), then the norms governing this kind of inference probably imply the inference is bad if such-and-such is not the case. Second, we can draw on our intuitions regarding the goodness of inferences. If we already know what the norms governing one kind of inference are, we can find out that there must also be another kind of inference by finding inferences such that evaluating them by the norms we already know yields the intuitively wrong verdicts.

Two examples may help to illustrate what I mean. The first example uses the Inferential Moorean Absurdity method to show that deductive inference is not a kind of inference. This is because making an inference while thinking it is not deductively valid—i.e. logically valid—is not absurd. Even in the case in which the inference is in fact deductively valid, the only problem with thinking that it isn't while making it is that what one is thinking is false; there isn't any additional irrationality. This comes out in the fact that logicians and their opponents disagree about whether their mathematical inferences are deductively valid,<sup>12</sup> but logicians don't claim that their opponents are transparently irrational from their own

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<sup>12</sup> They may—and usually will—push the disagreement into the premises for purposes of conversation, e.g., by disagreeing about whether certain axioms should count as logical. But it is easy to see the disagreement as a disagreement about whether the inferences we encounter in, say, arithmetic are logically valid.

perspective when they make mathematical inferences which they don't think are deductively valid.<sup>13</sup>

The second example illustrates a contrast of norms. There are inferences that can be shown to be bad by establishing that one can rationally accept the premises but reject the conclusion, given the doxastic and evidential situation of the thinker—in which, we assume, nothing like a defeasor of the inference is believed or evidentially supported. This norm is part of one or several sets of norms that define kinds of inference, or so I shall assume. We can see that there must also be other kinds of inference by realizing that some inferences cannot be shown to be bad in this way. Suppose someone reasons as follows: “The Copenhagen Interpretation of quantum mechanics is the one most physicists working in the area accept, according to polls taken at conferences. So the Copenhagen Interpretation of quantum mechanics is probably correct.” It seems that this can be a good piece of reasoning. After all, we lay people form most of our opinions about, e.g., medical issues in such a way, and we base decisions that have life changing effects on such opinions. Thus, I find it hard to believe that all such inferences are pieces of bad reasoning. However, someone who makes such an inference can surely admit that, even given her current evidential situation, she could rationally accept that the majority of physicists accept the Copenhagen interpretation while also rejecting that it is probably correct. She could say, “I don't know; if Einstein didn't believe it, the fishiness is probably not merely apparent.” The upshot is that there must be a kind of inference that is merely permissive, or what I shall call “probative.”<sup>14</sup>

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<sup>13</sup> This result is independently plausible. Although it has been a popular view in the tradition that logic provides us with norms of an alleged kind of deductive or logical or formal inference, Gilbert Harman has famously argued that “there is no clearly significant way in which logic is specially relevant to reasoning” (Harman, 1986, p. 20). And, indeed, it has proven difficult to spell out how logical consequence provides norms for reasoning (or belief) (Field, 2009; MacFarlane, 2004). This problem is exacerbated by the fact that it is not clear which inferences should count as “logically” or “formally valid” (Etchemendy, 1990; MacFarlane, 2000). Being an expressivist about logic, I hold that it is not the job of logic to provide us with norms of inference. Rather, logic makes explicit the goodness of materially (and formally) good inferences (see Hlobil, 2016b; Brandom, 2008). One crucial role of logic is to let us transform a ‘disagreement’ in the inferences we make into a disagreement about claims. This only helps if the inferential roles of these claims are pretty clear. But that doesn't require there to be a special kind of inference.

<sup>14</sup> A related issue has been discussed in the literature under the heading of whether evidence can be permissive (White, 2013; Kelly, 2013). I am basically siding with Kelly here, but my claim is about the permissibility of inferences and not directly about the permissibility of the resulting doxastic attitude. An advocate of what has come to be known as Uniqueness will resist my claim. Since the truth of Uniqueness will merely undermine my claim that there is a particular kind of inference, however, and my general account does not turn on this, I will not enter into this debate here.

As I said, I will not try to establish the existence of particular kinds of inference here. Instead, I want to merely suggest that two important dimensions along which kinds of inference vary are whether they are defeasible (vs. indefeasible) and whether they are merely probative (vs. dispositive). This gives us four kinds of inference, which I shall discuss in more detail from the next subsection onward. I am open to the possibility that the kinds of inference that actually exist are different ones. But the kinds of inference I am hypothesizing to exist will serve as useful examples and allow me to bring out the general structure of the Force Account.

### **4.2.3 Informing Inference**

We have seen in the previous section that Frege introduced the idea of force partly on the basis of two observations, which we can transfer from assertion to judgment: (a) one can have different attitudes toward one content, and (b) by judging a content one does not necessarily judge the contents that are embedded in it. These two ideas correspond to two traditional functions of Aristotelian forms: the form determines the nature or essence of a thing, and it unifies the thing whose form it is. In this subsection, I want to show how we can make sense of analogous ideas for the case of inferential force. In a nutshell, we should understand inferential force as giving the act of inferring its form: it determines the nature of the inference, and it makes an inference a particular unified act by singling out an argument to which the force is applied.

I have suggested in the previous subsection that there are various kinds of inference. So we can transfer the idea that force determines what kind of thing the act in which it is attached is, i.e., it determines its nature or essence. For the case of inference, this means that an inference belongs to a certain kind in virtue of it being a case of attaching a corresponding kind of inferential force. We discover what kinds of inferential force there are by discovering what kinds of inference there are. Given what I said in the previous subsection, this means that we distinguish different kinds of inferential force by the different norms that govern different classes of inference. In a slogan, inferential force determines the nature of an inference by determining the norms that govern the inference.



As already intimated—and as I will discuss further below—I assume that there are at least two important dimensions along which various kinds of inferences and the corresponding inferential forces vary. Firstly, some inferences are bad if the premises of the corresponding argument can be all true or correctly intended without the conclusion of the argument being true or correctly intended. It is a decisive criticism of such inferences to point to any situation—however remote from the actual situation—in which this occurs. Such inferences are indefeasible. When we make inferences in mathematics, they are typically of this kind. No matter what else turns out to be true, the inference still goes through. There are also inferences for which this doesn’t hold; these are defeasible inferences.

The second normative dimension along which kinds of inference vary is whether it is rationally permissible to accept all the premises of the corresponding argument while rejecting the conclusion of the argument—without any defeasors being present, as far as the reasoner knows. If this is not rationally permissible, we may call the inference “dispositive.” If it is, I will call it “probative.”<sup>15</sup> The “reason for” relation that underwrites dispositive inferences obliges us to accept the conclusion if we accept the premises (and are unwilling to revise them in light of this “reason for” relation). The “reason for” relation that underwrites probative inferences merely allows us to accept the conclusion on the basis of the premises.<sup>16</sup> This is particularly common in practical reasoning. Instrumental practical inferences, e.g., often merely point us toward a sufficient but not necessary means to our end, and it would be rationally possible to take a different means to achieve our end. This gives us four kinds of inference.

Another difference among inferences is the difference between practical and theoretical inferences. I will say that practical inferences are those that involve practical attitudes, such as intentions. Theoretical and practical inference are not two kinds of inference. Rather, they are two genera of inference, which include various kinds or species of inference. The “reason for” relations relevant for theoretical inferences are those of being a reason to believe

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<sup>15</sup> I use this vocabulary inspired by legal terminology because it reminds us of the difference between something that is used to merely support one’s view in a legal dispute and something that conclusively settles the case.

<sup>16</sup> This distinction is akin to Brandom’s (1994; 2008) distinction between commitment-preserving and entitlement-preserving inferences. I don’t use this terminology because there are different senses of “entitlement” that are relevant here: basically propositional and doxastic justification.

something; those relevant for practical inferences are relations of being a reason to do something. I am presupposing a grasp of this difference here. The “reason for” relations in both genera can be divided into the four groups delineated above: defeasible vs. indefeasible and dispositive vs. probative. So we now have eight different kinds of inference, which we individuate by the norms that govern them and, so, by the “reason for” relations that underwrite them.

The idea that we take over from the case of doxastic force is that what kind of inference a given inference belongs to is settled by the kind of inferential force that is attached to an argument in making the inference. We can relate to an argument in different ways, and these different ways are given by the different inferential forces. In more Aristotelian terms, the force gives the inference its nature or essence. This is analogous to thinking that we need doxastic force to distinguish belief and judgments from other ways of relating to judgeable contents, such as doubting or questioning.

The second job of Aristotelian forms is that of making the things whose form they are one. When we try to apply this idea to inference, the situation differs from the case of judgment in two important respects. First, the issue of embedded contents doesn’t even arise. This is because the contents that make up an argument, the premises and the conclusion, are not themselves arguments. So there is no question of the inferential force applying to embedded contents. It is not just true that by making an inference one is not making the inferences that correspond to the premises and the conclusion, the very idea is incoherent. Second, singling out an argument to which inferential force is applied does not suffice to determine which inference is made. The problem is that by attaching inferential force to an argument you may end up believing the conclusion on the basis of believing the premises, but you may also end up rejecting one of the premises on the basis of rejecting the conclusion and believing the other premises. We will look at this in more detail in the next section. For now it suffices to note that we don’t individuate inferences merely by the arguments to which inferential force is attached in them but also, as it were, by the “direction of the inference.” In any given situation, however, attaching a particular inferential force will result in a particular inference. This is partly in virtue of singling out a particular argument to which force is

attached in the inference. Once the argument is singled out and the particular situation is given, inferential force brings the different materials together in a unified act of inferring.

Despite these two complications, the idea still makes sense. After all, we need something that brings together particular premises and a particular conclusion in a unified act of inference. Without this the questions, e.g., whether two people made the same inference or which thoughts of a reasoner form part of a given inference will not have determinate answers. What gives us—at least partial—answers to these questions is that an inferential force attaches to a single argument. In this sense, inferential force unifies the inference in which it is attached.

To sum up, we can transpose our principle FORM-J from above into talk about inference and say:

FORM-I     Attaching a particular kind of inferential force determines the form of the thereby constituted inference, in that it (a) makes it the case that the act is an act of this kind of inference and (b) makes it the case that the act is a unified whole (given a specific epistemic situation).

One might think, at this point, that such a claim is interesting only for people with a taste for hylomorphic theories of mental acts. Why does it constitute genuine progress to say something like that? Primarily because it prevents certain confusions and errors. In particular, it prevents the error of thinking that the act of attaching force is a second act over and above the act of inferring. After all, the form of an animal is not a second animal, and the function of a car is not a second car. It also prevents us from thinking that there must be something that binds together the attitudes toward the premises, the attaching of force, and the attitude toward the conclusion into a unified act of inferring. We will see in the next chapter that I am not merely pointing to straw-men here; these are precisely the kind of errors that lead to standard problems with inferential internalism.

#### **4.2.4 Reflective Endorsement of Inferences**

We have looked at the first two aspects that we found in the idea of doxastic force, i.e. the determination of norms and the information of the act. We have seen how to transfer

these two aspects to the case of inference. Let's now turn to the third aspect: reflective endorsement.

I suggest that just as we judge by reflectively endorsing a judgment as living up to the norms that govern judgments, so we make a particular kind of inference by reflectively endorsing an inference as living up to the norms governing this kind of inference. We infer by 'taking' our inference to be a good inference of its kind. And this reflective endorsement or 'taking' is the act of attaching inferential force to an argument.

One immediate worry one might have regarding such a view is that it might seem mysterious what this act of attaching force, this 'taking,' actually is. It seems to me, however, that this worry is misplaced at this point. Since I don't think that a reductive analysis is possible, I claim that in order to understand this 'taking' we must connect the notion of 'taking' with enough other ideas. This is what I am trying to do here. I want to connect this idea of 'taking' one's inference to be good to the ideas of force, of 'taking' one's judgments to be true and justified, to the idea of the form of an act, and to the idea of norms that essentially govern acts such as inference. Hence, the demand for any kind of reduction, or analysis, or definition, or explanation in more familiar terms is misplaced at this point. If I succeed at the task I have set for myself, the dissertation as a whole should be a response to this worry. If it isn't even the beginning of such a response, I will have failed.

That being said, we may still wonder what this reflective endorsement might actually be. There is a genus here of which the inferential case is merely one species. We judge by reflectively endorsing our judgments as living up to the norms that govern judgments. In other words, we judge by 'taking' our judgments to be true and justified. Similarly, we hope by 'taking' our hope to be for something good or advantageous. We intend by 'taking' our intention to be of an action that we have sufficient reason to perform. I think there is even a sense in which we fear by 'taking' what we fear to be dangerous—though this case is complicated.<sup>17</sup> It seems to me that none of these 'takings' are beliefs or judgments, each of them informs the act it constitutes, and each of them can enter into the kind of absurdity I labeled Moore-2 in Section 2.4. So we are familiar with this kind of reflective endorsement

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<sup>17</sup> Emotions lie somewhere between acts of reason, which we perform by 'taking' them to live up to the norms that govern them, and acts of sensibility, which merely happen to us without our endorsement of them.

from many cases. While we certainly want to understand this reflective endorsement better, it seems unwarranted to say that it is “mysterious.”

Another worry may be that I can attach inferential force to an argument without making a corresponding inference. I may ‘see’ that something follows from  $P$ , but if I don’t believe that  $P$  this will not constitute an inference. Here we must distinguish two cases. First, I may suppose that  $P$  and then attach inferential force to an argument with  $P$  as its premise and  $Q$  as its conclusion. In this case, I have made an inference under the supposition that  $P$ . Second, I may not make any suppositions and deny  $P$ . In such a case, I claim that we cannot attach inferential force to the argument. We have no point of leverage from which to apply inferential force. Both of these cases will become clearer in the next section, when I discuss the relation between the attitudes we have towards the premises and conclusion and inferential force.

With these points cleared up, nothing stands in the way of taking judgment as our model and saying that the act of attaching a particular kind of inferential force is a reflective act of endorsing the inference as living up to the norms that govern it. So we can adjust the principle REFL-J above to the case of inference.

REFL-I      Attaching inferential force of a particular kind is done by reflectively endorsing the thereby constituted act as living up to the norms that essentially govern this kind of inference—in a manner that is not the manner of belief or judgment.

We can now put our three points together, as we did for judgment. According to the Force Account of inference, we make an inference by reflectively endorsing the inference as a good inference of its kind. This endorsement unifies the act and determines what kind of inference it is. What kind of inference it is is a matter of the norms that govern it. Hence, by reflectively endorsing the inference as living up to certain norms, we make it the case that the thereby constituted inference is in fact governed by these norms. Putting all of this into a single statement, we get:

INF-F      Attaching a particular kind of inferential force is the act of reflectively endorsing—in a manner that is not the manner of belief or judgment—the thereby constituted act (with the thereby singled out argument) as living up to the

norms that essentially govern the corresponding kind of inference and thereby making it the case that the act is an inference of this kind (and thus the norms apply).

The Force Account of inference says that making an inference is such an act of attaching a particular kind of inferential force to a particular argument, in a given doxastic situation. This identification is to be understood on the model of the identity between judging something and taking it to be true (and justified, etc.).

We now have an answer to the question: What does it mean to attach an inferential force to an argument? Attaching an inferential force to an argument does three things: (a) it makes it the case that certain norms apply to the thereby constituted act, (b) it gives the thereby constituted inference a particular form, and (c) the thinker thereby endorses her act as living up to the norms that govern inferences of the kind. These are not three distinct and separate functions of inferential forces. They are merely three aspects of attaching an inferential force. In attaching an inferential force, these three things necessarily happen together and in a single manifestation of the thinker's rational capacities. That is what it means to make an inference.

This account of inference and inferential force is still abstract and in need of further clarification. That is the task of the remainder of this dissertation. The first issue on which further clarification is needed is how, according to the Force Account, an inference can get us to gain new knowledge or to perform an action. After all, it is not obvious how attaching inferential force to an argument leads to a new belief or intention. This is the topic of the next section.

### 4.3 INTERLOCKING FORCES

In the previous section, I have laid out my suggestion that making an inference is an act of attaching a particular kind of inferential force to a structure of contents, i.e. an argument. In this section, I will explain how inferring can yield new beliefs and intentions. The upshot will be that we can understand inference as an act of settling one's attitude toward the

conclusion of the inference. In this way we can capture the common sense idea that typical theoretical inferences are acts of judging the conclusion in light of the premises. Thus, the Force Account allows us to agree with Frege that, in the case of typical theoretical inferences, “[t]o make a judgement because we are cognisant of other truths as providing a justification is known as inferring” (Frege, PW, p. 3).

The general idea will be that by attaching an inferential force to an argument, we make our attitudes towards the involved contents fit a pattern that is rationally permitted. There are typically various rationally permitted patterns of attitudes toward the contents that make up arguments. One might, e.g., accept the premises and also accept the conclusion of an argument in which the contents are related in an indefeasible, dispositive “reason for” relation. One might, however, also reject the conclusion and reject at least one of the premises. By making an inference, the thinker settles on one of these patterns. But when and how can we settle on one of these patterns? I will argue that there are two factors that determine which pattern we settle on by attaching a particular inferential force to an argument: how much we assent to each of the involved contents before making the inference, and how ‘willing’ we are to change these attitudes. If these factors determine a unique pattern of attitudes, we can attach inferential force and thereby gain a new belief or intention. In a slogan: attaching inferential force brings the other forces (e.g. doxastic force) to line up in the right way. It will be an additional benefit of this account that it allows us to understand inferences under suppositions.

In order to understand the view just sketched, we must pick up where we left off in the previous section. There I have suggested that we understand inference on the model of judgment. This can make it seem as if I want to understand inference as something on the same level as judgment, belief, intention, and the like. That, however, cannot be right. After all, we can form a judgment as the conclusion-attitude of an inference. Believing, intending and the like don’t bring us to new judgments in anything like this way. Judgments, beliefs and intentions can be parts of inferences; they can occur as premise- or conclusion-attitudes. But they neither occur as parts of each other, nor can inferences occur as premise- or conclusion-attitudes of further inferences (see Section 4.5.3 below). In these respects inferring differs markedly from judgments, beliefs, intentions, and the like.

One way of putting this is to say that inferences bring together and combine acts and attitudes that deal with single contents (and not structures of contents). And by doing this, inferring can lead to a new act or attitude of this simpler kind, which we may call “sub-inferential.” But how does this work, on my account?

If we analyze both, inference and judgment, in terms of forces, the formation of judgments in inferences must be the result of an interaction of the two different forces. If we attach, e.g., doxastic force to all the premises of an argument but not to the conclusion and we attach inferential force to the argument, then this must lead us to attach doxastic force to the conclusion of the argument. This is indeed what I think is going on. It is the job of this section to clarify, unpack, and spell out this idea.

Before I begin to explain how inferential force and other forces interact, it must be emphasized that doing so is part of spelling out what inferential force is. Hence, I am emphatically not saying that we can first understand what inferential forces are and then investigate how they interact with other kinds of force. Rather, it is part of what it is to be an inference that by making an inference we form a judgment or some other attitude.

Moreover, I must emphasize that what I am going to say here is based on massive simplifications and idealizations. I want to explain the rough outlines of the view. There will be lots of places where details need to be filled in or where I will ignore complicated cases or simply assume that we already have a solution to a problem when we actually have no such solution. This situation is virtually impossible to avoid when studying a phenomenon as complicated and under-theorized as inference. With this in mind, let’s get down to work.

#### **4.3.1 Basic Materials**

The general idea of this section is that attaching an inferential force to an argument makes the pattern of the thinker’s attitudes toward the involved contents be one that is permitted by the norms that underwrite the inference. In order to get the idea on the table, let’s start with a simple (but ultimately somewhat misleading) example: it seems plausible that the relation that underwrites indefeasible, dispositive inferences is that there is no possible situation in which all the premises of the argument to which inferential force is attached



are true but the conclusion of the argument is false. Consequently, the only patterns of attitudes toward these contents that are rationally permitted are those in which the thinker either accepts the conclusion or rejects at least one of the premises. The thinker rationally ought to instantiate one of these patterns. If the thinker now actually attaches inferential force—of the indefeasible, dispositive kind—to the argument, she will in fact instantiate such a pattern. It will be impossible—given that she actually makes the inference—that she, e.g., accepts all the premises but rejects the conclusion of the argument.

Notice the change in modality. The relation that underwrites the inference rules out certain patterns of attitudes as rationally impermissible; attaching inferential force to the argument rules out that the thinker actually instantiates any of these impermissible patterns. Before the inference it is not permitted to hold a certain combination of attitudes; after the inference it is (alethically) impossible. Inference is a way of actually bringing ourselves in line with the (apparent) norms governing patterns of attitudes.

In order to work out this general idea, we need to do two things. First, we need to say more about the norms governing patterns of attitudes, i.e. the relations that underwrite good inferences. Since there are various kinds of inference, there will be various kinds of these relations. Second, we must say how a particular pattern of attitudes is selected from the various patterns left open by the relation (apparently) underwriting an inference. In this subsection, I will address the first of these issues. That is, I will say more about the different relations that underwrite good inferences. The remainder of this section will then deal with the second issue.

We will need two kinds of basic materials: attitudes toward contents that can occur as premise- and conclusion-attitudes in inference, and norms governing patterns of attitudes. I will limit myself to a small number of kinds of premise- and conclusion-attitudes and a small number of norms governing patterns of attitudes. Let's begin with the latter.

The norms governing patterns of attitudes are the things that underwrite good inferences. We can think of them as normative relations between the contents of the arguments involved in the inferences.<sup>18</sup> They stand in one-to-one correspondence to the “reason for” relations

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<sup>18</sup> That is why the example given above is somewhat misleading. There it seemed as if the relation was the metaphysical relation of necessary truth preservation. Thinking along these lines is helpful in many cases, but it is not general enough to cover all cases. I think that, ultimately, it is more helpful to think,

that we encountered in our investigation into kinds of inference, and so they correspond to the different kinds of inference. This is no accident. We can think of the paradigm of an inference as one in which we come to accept the conclusion of the involved argument on the basis of our acceptance of the premises. If the inference is a good one of a particular kind, the premises will be reasons to accept the conclusion—where the “reason for” relation will be the one that is characteristic of the kind of inference we are making.

I shall look at the “reason for” relations that govern six of the eight kinds of inference mentioned in the previous section. I exclude those for probative indefeasible inferences in both, the theoretical and practical case, because we already have a lot of these relations, and the ones I exclude seem uninteresting to me. For each of these relations, I give a label, a description in terms of “reasons for,” a description in terms of patterns of attitudes, a gloss, and examples. Notice that these are relations between contents, which we define in terms of norms governing attitudes.

(1) Theoretical “reason for” relations

(1.a) Dispositive-indefeasible relation<sup>19</sup>

*Reason-Description:*  $A_1, \dots, A_n$  are conclusive and indefeasible reasons to believe that  $B$ .

*Pattern-Description:* It is not rationally permitted to accept all of  $A_1, \dots, A_n$  and also to reject  $B$ .

*Gloss:* If the premises are true, the conclusion must be true no matter what else is the case.

*Example:* That the keys are either in the car or in my pocket and that they are not in my pocket is conclusive and indefeasible reason to believe that they are in the car.

(1.b) Dispositive-defeasible relation<sup>20</sup>

*Reason-Description:*  $A_1, \dots, A_n$  are conclusive but defeasible reasons to believe that  $B$ .

*Pattern-Description:* It is not rationally permitted to accept all of  $A_1, \dots, A_n$  and

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e.g., of possible worlds as maximal coherent sets of propositions, where we understand coherence of sets of propositions in terms of norms governing patterns of attitude combinations.

<sup>19</sup> I think that these are the kind of relations monotonic logic ought to study.

<sup>20</sup> I think that these are the kind of relations non-monotonic logic ought to study.

also to reject  $B$ , unless one also accepts a content that defeats the relation.

*Gloss:* If the premises are true, it is irrational to deny the conclusion unless one can rationally claim that a defeasor is present.

*Example:* That she has antibodies of such-and-such a kind in her blood is conclusive but defeasible reason to believe that she contracted disease so-and-so.

(1.c) Probative-defeasible relation<sup>21</sup>

*Reason-Description:*  $A_1, \dots, A_n$  are sufficient but defeasible and non-obliging reasons to believe that  $B$ .

*Pattern-Description:* It is rationally permitted but not obligatory to accept  $B$  on the basis of accepting all of  $A_1, \dots, A_n$ , unless one also accepts a content that defeats the relation.<sup>22</sup>

*Gloss:* If the premises are true, one can (but need not) rationally believe the conclusion on this basis, unless a defeasor is present.

*Example:* That the Copenhagen interpretation of quantum mechanics is the most widely accepted interpretation among physicists is sufficient but defeasible and non-obliging reason to believe that the interpretation is correct.

(2) Practical “reason for” relations

(2.a) Dispositive-indefeasible relation

*Reason-Description:*  $A_1, \dots, A_n$  are conclusive and indefeasible reasons to do  $\phi$ .

*Pattern-Description:* It is not rationally permitted to accept (practically or theoretically) all of  $A_1, \dots, A_n$  and also to not intend to do  $\phi$ .

*Gloss:* If the premises are all held rationally and correctly, one should do  $\phi$ —no matter what else might be the case.

*Example 1:* That I rationally intend to do  $\psi$  and it is impossible to do  $\psi$  without doing  $\phi$  is a conclusive and indefeasible reason to do  $\phi$ .

*Example 2:* That what I am doing is torturing a baby for fun is a conclusive and indefeasible reason to stop doing it.

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<sup>21</sup> I think that these are the kind of relations confirmation-theory ought to study.

<sup>22</sup> Notice that I use the idea of basing in describing this “reason for” relation. This is but one of the ways in which the account I am developing here is not reductive.

(2.b) Dispositive-defeasible relation

*Reason-Description:*  $A_1, \dots, A_n$  are conclusive but defeasible reasons to do  $\phi$ .

*Pattern-Description:* It is not rationally permitted to accept (practically or theoretically) all of  $A_1, \dots, A_n$  and also to not intend to do  $\phi$ , unless one also accepts a content that defeats the relation.

*Gloss:* If the premises are all held rationally and correctly, one should do  $\phi$  unless one can rationally claim that a defeasor is present.

*Example:* That I received undeserved favors from someone is conclusive but defeasible reason to thank that person.

(2.c) Probative-defeasible relation

*Reason-Description:*  $A_1, \dots, A_n$  are sufficient but defeasible and non-obliging reasons to do  $\phi$ .

*Pattern-Description:* It is rationally permitted but not obligatory to do  $\phi$  on the basis of accepting all of  $A_1, \dots, A_n$ , unless one also accepts a content that defeats the relation.

*Gloss:* If the premises are all held rationally and correctly, one can (but need not) rationally  $\phi$  on this basis, unless a defeasor is present.

*Example:* That I need to get to the airport and that taking the bus will get me to the airport is sufficient but defeasible and non-obliging reason to take the bus.

We are familiar with these “reason for” relations from the discussion of kinds of inference above (see Sections 4.2.2 and 4.2.3). I don’t think we can explain what these relations are without relying on a rich understanding of norms governing attitudes and, actually, inferences. This is one of the ways in which I am not offering a reductive explanation or analysis. It seems to me, however, that we are all familiar with the six phenomena just listed.

If a dispositive relation holds between the premises and the conclusion of an argument, certain patterns of attitudes are impermissible. If merely a probative relation holds, a pattern is permissible. The only pattern of attitudes ruled out by a probative defeasible relation between the premises and the conclusion of an argument is one in which the thinker bases her acceptance of the conclusion on the premises but also accepts a defeating content. A

probative and indefeasible relation doesn't rule out any pattern of attitudes as impermissible. As we will see below, this limits the way in which such relations can be exploited in inferences. For I will claim below that in making an inference of a given kind we bring our attitudes in line with the requirements or permissions of the corresponding "reason for" relation. For now it suffices to note that these "reason for" relations have normative implications for what patterns of attitudes are rationally permissible and that they correspond to the kinds of inference—and, hence, the kinds of inferential force—that we have encountered above.

We now have six normative relations that govern patterns of attitudes on the table. The other sort of basic material we need are attitudes that can occur as premise- or conclusion-attitudes in inferences. I want to look at four theoretical attitudes and four practical attitudes of this kind. The following list contains the attitudes along with abbreviations for them and typical linguistic expressions of them.

(I) Theoretical attitudes

(I.a) believing (or judging) that  $P$  (abbr. B)

*Typical expression:* " $P$ "

(I.b) suspending judgment on whether  $P$  (abbr. S)

*Typical expression:* "for all I know,  $P$  may be true"

(I.c) doubting whether  $P$  (abbr. U)

*Typical expression:* "it seems implausible that  $P$ ; I'd be surprised if it turned out to be true"

(I.d) denying that  $P$  (abbr. D)

*Typical expression:* "it can't be that  $P$ "

(II) Practical attitudes

(II.a) intending to  $\phi$  (abbr. I)

*Typical expression:* "I am going to  $\phi$ "

(II.b) being open to (considering)  $\phi$ -ing (abbr. O)

*Typical expression:* "I may very well  $\phi$ , but I haven't decided yet"

(II.c) being reluctant to (tending not to)  $\phi$  (abbr. R)

*Typical expression:* "I'd rather not  $\phi$ "

(II.d) avoiding (rejecting) to  $\phi$  (abbr. A)

*Typical expression:* “I won’t  $\phi$ ”

I will assume that we are familiar with these attitudes. I will later add to this list the idea of supposing something. But in order to introduce this idea, we first need to have more of the machinery on the table.

### 4.3.2 Assent-Rank

The overall idea of this section is that attaching an inferential force to an argument constrains what kind of force one can attach to the premises and the conclusion. So if we attach an inferential force to an argument, this rules out certain combinations of attitudes towards the contents that make up the argument. Inferring makes it the case that the attitudes of the thinker are actually how they (apparently) ought to be. In my description of the six “reason for” relations above, I have described various patterns of acceptance and rejection that are impermissible if particular “reason for” relations hold between the contents of an argument. However, we have now eight attitudes that we must consider. So we must look in more detail at which “reason for” relations make which patterns of attitudes impermissible.

In order to address this issue, it is useful to introduce the notion of *assent-rank*. Notice that we can (totally) order the theoretical and practical attitudes according to the assent or affirmation they involve regarding the content. If I believe that  $P$ , e.g., I assent more to  $P$  than if I suspend judgment on whether  $P$ . Suspending judgment on the matter involves more assent than doubting that  $P$ . And if I deny that  $P$ , I am even less assenting to  $P$ —in fact, I am not assenting to  $P$  at all.

In the practical case, I assent more to doing  $\phi$  when I intend to do it than when I am merely open to the possibility of doing it. If I am reluctant to do  $\phi$ , I assent less to it than if I am open to the possibility of doing it. And I am least assenting to doing  $\phi$  when I am rejecting to do it.

Let’s write the theoretical and practical assent-ranks as “ $pt$ ” and “ $pp$ ” respectively. So we have the following two total orders on the two sets of attitudes according to the degree to which they constitute assent.

$$\begin{array}{ll}
\rho t & \rho t[B] > \rho t[S] > \rho t[U] > \rho t[D] \\
\rho p & \rho p[I] > \rho p[O] > \rho p[R] > \rho p[A]^{23}
\end{array}$$

Notice that if you form an attitude towards a conjunction, this attitude should depend on your attitude towards the conjuncts, and *vice versa*. If you believe that  $P$  and you believe that  $Q$ , then you should believe that  $P$  and  $Q$ . If you doubt that  $P$  and  $Q$ , it's rationally impermissible for you to believe both conjuncts. You may suspend judgment regarding both conjuncts and nevertheless doubt or deny the conjunction. In general, the assent-rank of the attitude towards the conjunction shouldn't be higher than the assent-rank of the attitude towards the conjunct that has the lowest assent-rank. And if one denies one of the conjuncts, one should deny the conjunction.

In the practical context, conjunction works in a peculiar way. I might intend to water the plants and leave but not intend to leave and water the plants. I might be reluctant to meet Fred and also be reluctant to drink alcohol but be quite open to the possibility to meeting Fred for drinks (who is terribly funny when he is drunk). I may intend to talk to Sara and intend to talk to Tiara without intending to talk to Sara and Tiara. The reason for all this is that if we combine several actions into one action, this can change what we are doing in dramatic ways, depending in part on how we combine the individual actions, e.g., in which order, if any, we perform them. Luckily, I can avoid getting into these difficult issues. I will avoid using the idea of attitudes towards conjunctions in the practical case.

With the notion of assent-rank defined and the idea of theoretical attitudes towards conjunctions in place, we can turn to the question which combinations of attitudes can occur when we attach various kinds of inferential force to arguments.

### 4.3.3 Attitude-Combinations in Theoretical Inferences

Let us begin with theoretical inferences of the dispositive-indefeasible kind. If we reflect on a couple of examples, it is easy to realize that the combinations of attitudes that are impermissible if a dispositive-indefeasible “reason for” relation holds are those in which the attitude toward the conclusion has a lower assent-rank than the attitude towards the conjunction of

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<sup>23</sup> I am using the same symbol for both ordering relations. No confusion will arise from that.

the premises would have were the subject to form it (without therein changing her attitudes toward the conjuncts). So those are the patterns of attitudes that attaching dispositive-indefeasible inferential force will make impossible. It will thereby bring the attitudes of the thinker in line with the normative relations that govern them.

I cannot, e.g., attach dispositive-indefeasible inferential force to an argument and also attach doxastic force to all the premises but suspend judgment on whether the conclusion is true. Similarly, if I attach dispositive-indefeasible inferential force to an argument with two premises, my attitudes towards the premises cannot be such that if I were to form an attitude towards their conjunction it would be the attitude of doubting, when I also deny the conclusion. In general, the following principle regarding the combinations of attitudes holds:

$\rho$ TDM    If someone attaches dispositive-indefeasible inferential force to an argument, then her attitudes will be such that if she were to form an attitude towards the conjunction of the premises (based on these attitudes), it would be such that  $\rho t[\text{conclusion-attitude}] \geq \rho t[\text{attitude toward conjunction of premises}]$ .

What happens if we attach theoretical dispositive-defeasible force? If the reasoner has no attitude towards any of the defeasors, the same as in the indefeasible case happens. In order to deal with other cases, we must define an inverting function on assent ranks. Let's say that  $\rho t^{-1}[B] = \rho t[D]$ ,  $\rho t^{-1}[S] = \rho t[U]$ ,  $\rho t^{-1}[U] = \rho t[S]$ , and  $\rho t^{-1}[D] = \rho t[B]$ . Now, if there is a defeating content,  $P$ , and the reasoner has an attitude towards it, then the assent rank of the attitude towards the conclusion must be equal to or greater than the (hypothetical) attitude towards the conjunction of the premises or it must be equal to or greater than the inverse of the attitude toward the defeasor.

$\rho$ TDN    If dispositive-defeasible inferential force is attached to an argument, then either  $\rho t[\text{conclusion-attitude}] \geq \rho t[\text{attitude toward conjunction of premises}]$  or there is a defeating content,  $P$ , and  $\rho t[\text{conclusion-attitude}] \geq \rho t^{-1}[\text{attitude towards } P]$ .

Here is an example of such a case. If the timetable says that there is a train to New York at 11 am, this is conclusive but defeasible reason to believe that there is a train to New York at 11 am. That the timetable is out of date is a defeating content for this "reason for" relation.



Now, suppose I believe that the timetable says that there is a train to New York at 11 am. If I don't have any attitude towards the content that the timetable is out of date and I attach theoretical dispositive-defeasible inferential force to the argument, I must believe that there will be a train to New York at 11 am. Suppose, however, that I suspend judgment on whether the timetable is out of date. In that case I might doubt that there will be a train to New York at 11 am. Our principle  $\rho$ TDN explains this because if I suspend judgment regarding the defeasor, the inverse of the assent-rank of this attitude is the assent-rank of doubting. And so I can have any attitude towards the conclusion whose assent-rank is greater than or equal to the assent-rank of doubting.

What about theoretical probative-defeasible inferences? Notice, first of all, that it is rationally permissible to believe that  $A_1, \dots, A_n$  are sufficient but defeasible and non-obliging reasons to believe that  $B$ , believe all of  $A_1, \dots, A_n$ , and still deny  $B$ . After all,  $A_1, \dots, A_n$  are non-obliging reasons. However, if one believes  $A_1, \dots, A_n$  and makes the probative-defeasible inference to  $B$ , one thereby forms the belief that  $B$ . Hence, one cannot believe  $A_1, \dots, A_n$ , attach theoretical probative-defeasible force to the corresponding argument, and not attach doxastic force to  $B$ —unless one is assenting to the presence of a defeasor. But this is not a normative restriction; it is merely a matter of what in fact happens when you make a probative-defeasible inference. The way we can exploit probative-defeasible “reason for” relations in inference is therefore very limited. It only allows us to bring the assent-rank of the attitude toward the conclusion up to the level of the assent-rank of the (hypothetical) attitude toward the conjunction of the premises. Such inferences always lead from the premises of the argument to its conclusion. They cannot result in the rejection of one of the premises based on a rejection of the conclusion. So what happens is that  $\rho$ TDN applies in this case as well, but the attitudes toward the premises (and hence the hypothetical attitude toward their conjunction) are fixed and cannot be changed by attaching probative-defeasible force.

We now have some insight into the fine-structure of the patterns of attitudes that are ruled out by theoretical inferences. The easiest case is the one in which the thinker attaches probative-defeasible force to an argument while attaching doxastic force to all the premises of the argument and having no attitude toward the conclusion. The thinker will thereby

come to attach doxastic force to the conclusion of the argument. The thinker settles her attitude toward the conclusion by attaching inferential force to the argument. It is worth repeating at this point that the attaching of doxastic force to the conclusion of the argument is not something that happens in a second step, as it were, after inferential force has been attached to the argument. Rather, it is like applying force to each part of a solid object by applying force to the whole object. The thinker settling her attitude toward the conclusion is just one aspect of her act of attaching probative-defeasible force to the argument, in the context of her attitudes toward the premises.

The complicated cases that we need to look at below are cases in which the thinker settles her attitude toward one of the premises by attaching inferential force to the argument, i.e., cases in which the thinker is, as it were, inferring backwards.<sup>24</sup> For principles like  $\rho$ TDN tell us nothing about when a reasoner will infer backwards in this sense.

Before moving on to practical inference, let me mention a similarity that might help to understand what I am doing. Broadly similar ideas to the ones presented in this section are familiar from subjective probabilities in Bayesian epistemology.<sup>25</sup> Ernest Adams (1998), for example, has suggested that an inference is valid in a probabilistic sense just in case, for all uncertainty functions, the uncertainty of the conclusion is less than or equal to the sum of the uncertainty of the premises, where an uncertainty function,  $u$ , is obtained from a probability function,  $P$ , by the principle that, for any proposition  $A$ ,  $u(A) = 1 - P(A)$ . And Hartry Field (2009, p. 259) applies such an idea in spelling out how entailment puts constraints on the combinations of attitudes one can rationally have when he writes:

(D\*) If it's obvious that  $A_1, \dots, A_n$  together entail  $B$ , then one ought to impose the constraint that  $P(B)$  [where this is the thinker's subjective probability that  $B$ ] is to be at least  $P(A_1) + \dots + P(A_n) - (n - 1)$ , in any circumstance where  $A_1, \dots, A_n$  and  $B$  are in question.

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<sup>24</sup> Broome has recently presented some interesting thoughts on such cases (Broome, 2013, p. 244). He does not, however, realize that in order to account for such cases we must distinguish assent-rank from rigidity.

<sup>25</sup> There is also a striking similarity to bilateralism (Rumfitt, 2000; Restall, 2005). After all, bilateralists want to understand the idea of a number of premises implying some conclusion(s) by saying that this occurs just in case it is somehow prohibited or irrational to assert all the premises and also to deny all the conclusion(s). Hence, bilateralists think of statements of implications as statements about constraints on combinations of assertions and denials.

These are all ways of spelling out the idea that when there is a relation between premises and conclusion that underwrites a good inference, then the more you assent to the premise the more you ought to assent to the conclusion. This general idea is intuitive and compelling. As will become clear in due course, however, my view differs markedly from broadly Bayesian accounts of inference.<sup>26</sup> First of all, I will work in a much more coarse-grained framework and only use four levels of assent. Second, I will talk only about the contents involved in particular arguments. So we don't need anything like a complete probability distribution. Third, we don't need to accept the strictures of the probability calculus as normative for patterns of attitudes. So we can stay much more open-minded about the norms governing patterns of attitudes than Bayesian epistemology. Finally, in contrast to the Force Account, Bayesians are running together two 'quantities,' namely how much one assents to something, on the one hand, and how firm or rigid this level of assent is (however low or high it may be), on the other hand. I will return to this in Section 4.3.5 below.

#### 4.3.4 Attitude-Combinations in Practical Inferences

The case of practical inference works similarly to the theoretical case. The biggest difference is that theoretical attitudes can occur as premise-attitudes in practical inferences, whereas practical attitudes cannot occur as premise-attitudes in theoretical inferences. Indeed, I want to allow for the possibility that (a sort of) Humeans are wrong, and there are practical inferences all of whose premise-attitudes are theoretical attitudes. Let us begin with such inferences and, in particular, with inferences of this kind that are of the dispositive-indefeasible type.

Suppose I discover that my neighbor is torturing babies for fun, and this gives me conclusive and indefeasible reason to report him to the authorities.<sup>27</sup> What attitude towards the conclusion should I have given different attitudes toward the premise? Obviously, if the premises are dispositive-indefeasible reasons for reporting my neighbor to the authorities, I am rationally required to either not believe that my neighbor tortures babies for fun

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<sup>26</sup> I discuss Bayesian views on inference in more detail elsewhere (Hlobil, 2016a).

<sup>27</sup> Perhaps this practical inference can be defeated by a premise like "The authorities are a bunch of criminals who will help my neighbor rather than put an end to his actions." Let us ignore such a possibility for the sake of the argument.

or intend to report him to the authorities. That is the normative situation. If I attach dispositive-indefeasible force to the corresponding argument, I will thereby come to satisfy this normative requirement. Using assent-ranks in the same way as above, the result is this: if I believe that my neighbor is torturing babies for fun and I attach practical dispositive-indefeasible force to the argument, I must intend to report him to the authorities. If I suspend judgment on whether my neighbor is torturing babies for fun, I must at least be open to the possibility of reporting him. If I doubt but don't deny that he is guilty of this atrocity, I cannot attach this kind of inferential force to the argument and nevertheless think "No matter what, I won't report him to the authorities." So if we are dealing with an inference of this kind—with only one theoretical premise—the constraint that attaching inferential force puts on our attitudes can be expressed in a straightforward way. First, we define a translation function,  $\vartheta$ , of theoretical assent-ranks into practical assent-ranks:  $\vartheta(\rho t[B]) = \rho p[I]$ ,  $\vartheta(\rho t[S]) = \rho p[O]$ ,  $\vartheta(\rho t[U]) = \rho p[R]$ ,  $\vartheta(\rho t[D]) = \rho p[A]$ . We can now say:

$\rho$ PDM-1p     If someone attaches practical dispositive-indefeasible inferential force to an argument with just one theoretical premise, then her attitudes will be such that  $\rho p[\text{conclusion-attitude}] \geq \vartheta(\rho t[\text{premise-attitude}])$ .

Can we generalize these ideas to the case where the argument to which we attach inferential force has not only a theoretical but also a practical premise? Suppose we attach dispositive-indefeasible force to the following argument: First premise: "traveling from Europe to America."<sup>28</sup> Premise two: "I cannot travel from Europe to America without crossing the Atlantic." Conclusion: "crossing the Atlantic." The normative situation is the following: If I intend the first premise and believe the second one, I must intend the conclusion. If I suspend judgment regarding the second premise, it seems to me, I should at least be open to the option of crossing the Atlantic. And if I doubt but don't deny that I cannot travel to America without crossing the Atlantic, I should at least not categorically reject crossing the Atlantic.

What happens if I am merely open to the option of traveling to America? If I believe that I cannot do so without crossing the Atlantic, I should at least be open to the option of crossing

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<sup>28</sup> I assume here that the contents of intentions and the like are the contents of action-descriptions. Nothing, however, hangs on this assumption.

the Atlantic. And if I am merely reluctant to travel to America and believe the second premise, I should at least not rule out crossing the Atlantic. And we can generalize these ideas to other practical attitudes toward the first premise in the obvious way. If a thinker now actually attaches dispositive-indefeasible inferential force to an argument with a practical and a theoretical premise, she will thereby come to satisfy the normative requirements just outlined. Thus, we get:

$\rho$ PDM-2p     If someone attaches practical dispositive-indefeasible inferential force to an argument with just two premises, one of which is theoretical, then her attitudes will be such that  $\rho p[\text{conclusion-attitude}] \geq \min(\rho p[\text{practical premise-attitude}], \vartheta(\rho t[\text{theoretical premise-attitude}]))$ .

This principle predicts, e.g., that if you attach practical dispositive-indefeasible inferential force to an argument and you are reluctant to do what the practical premise describes and you doubt what the theoretical premise says, you cannot (alethic modality) reject to do what the conclusion describes. You must at least be reluctant with respect to the conclusion. That seems right.

Moving on to dispositive-defeasible practical inferential force, we can transfer the treatment of defeasors from the theoretical case. The result is this:

$\rho$ PDN-2p     If someone attaches practical dispositive-defeasible inferential force to an argument with two or fewer premises, one of which is theoretical, then her attitudes will be such that  $\rho p[\text{conclusion-attitude}] \geq \min(\rho p[\text{practical premise-attitude}], \vartheta(\rho t[\text{theoretical premise-attitude}]))$  or there is a defeating content,  $P$ , and  $\rho p[\text{conclusion-attitude}] \geq \vartheta(\rho t^{-1}[\text{attitude toward } P])$ .

This principle implies, e.g., that if I believe that I have received an undeserved favor and I suspend judgment on whether my benefactor would be embarrassed by me thanking her (which, say, is a defeating content), I cannot reject thanking my benefactor. I must at least be reluctant or even be open or intending to thank my benefactor. That again seems right.

As in the theoretical case, the treatment of probative-defeasible force is just like that of dispositive-defeasible force except that the premise-attitudes cannot be changed by the inference. If I intend the practical premise and believe the theoretical premise and I attach

probative-defeasible force to the argument, I must intend the conclusion, unless I am assenting to a defeating content. We cannot infer backwards, as it were, by attaching probative-defeasible force. We can just bring the practical assent to the conclusion up to the level allowed by the premise-attitudes. It is this kind of inference that is most common in the practical realm. After all, practical inferences are virtually always defeasible, and usually there is more than one way of getting something done.

Just as my treatment of attitude-combinations in theoretical inferences bears similarities to Bayesian accounts, so my treatment of attitude-combinations in practical inferences may seem similar to accounts in the spirit of rational choice theory. If we interpret the assent-rank of a practical attitude as an ascription of utility and think that where I take the minimum I should really take the product of two continuous values, it can seem that my account is a crude simplification of the calculation of the utility of performing the action that is described in the conclusion. The kernel of truth in this is, I think, that the wish to perform the conclusion of a practical inference must derive from the wish to perform the (practical) premise, in cases where there is a practical premise. But the similarity goes no deeper than that. This will become very clear once I add the next piece to the Force Account.

#### **4.3.5 Rigidity of Forces**

We have seen that the different “reason for” relations that underwrite good inferences have different normative implications regarding which patterns of attitudes are permissible. By making an inference, the thinker brings herself into conformity with these normative implications by settling one of her attitudes. I have spelled out which patterns of attitudes are permissible—and can, hence, be the result of an inference—by ordering the attitudes the thinker has toward the premises and the conclusion of an argument according to how much the thinker assents to the content by having the attitude. This idea, however, does not tell us which pattern of attitudes a thinker adopts as the result of an inference, at least not for dispositive inferential forces. Consequently, we still don’t know how a thinker settles one of her attitudes by making a dispositive inference. How do we come to believe and intend things by making inferences?

In order to answer this question, we need the idea that beliefs, intentions, and other attitudes can be held with varying degrees of stability or rigidity; particular attitudes toward particular contents can vary in how easy or difficult it is to change them. The following example illustrates the basic idea: If I believe that  $A$  and I deny that  $B$ , then the result of attaching dispositive indefeasible force to the argument  $\langle \{A\}, B \rangle$  will be believing that  $B$  if my belief in  $A$  is more rigid than my denial of  $B$ . If, however, my denial of  $B$  is more rigid than my belief that  $A$ , then the conclusion of my inference will be the denial of  $A$ . A similar idea is familiar from the notion of *epistemic entrenchment* that is used in belief-revision theory (Gärdenfors and Rott, 1995; Gärdenfors, 1988; Rott, 2004). Hans Rott explains the intuitive idea as follows:

The term ‘entrenchment’ as it is used here means something like ‘comparative retractability’ or ‘vulnerability’. If  $\phi$  is at most as entrenched as  $\psi$ , this means that in a case of doubt when one needs to give up either  $\phi$  or  $\psi$ , it is not more difficult or painful to give up  $\phi$  than to give up  $\psi$ . (Rott, 2004, p. 259)

In contrast to belief-revision theory, I don’t want to construct a formal system. Hence, I don’t need to commit myself to particular constraints that entrenchments or degrees of rigidity must meet in order to be rational. One plausible such constraint is, e.g., that you shouldn’t rigidly believe two things without also rigidly believing the conjunction; otherwise you might give up belief in the conjunction without giving up belief in one of the conjuncts. For my purposes, it suffices to note that the degree of rigidity with which, say, doxastic force is attached can be more or less rational. Since degrees of rigidity, in effect, encode dispositions to change one’s attitude under various conditions, an attitude is held with a rational degree of rigidity just in case the subject is disposed to change the attitude, in response to rational pressure to give up either this or some other attitudes, in exactly those situations in which this is the rational reaction. And that is the rational reaction if more is speaking in favor of abandoning the attitude at issue than speaks in favor of abandoning the other attitude. In order to say something more informative at this point, we would need to unpack our intuitive ideas of things overall speaking in favor of, say, doubting whether  $P$  or in favor of being reluctant to do  $\phi$ . I shall not try to do that here.

From the first-person perspective, the rigidity of an attitude is a matter of how well-supported the attitude appears to be (except in cases of epistemic akrasia). Take, e.g., the

liar paradox; it seems that the paradox forces us to give up one of the following three: classical logic, the unrestricted T-schema, or the idea that self-referential sentences are non-defective. I may give up classical logic because accepting the unrestricted T-schema and self-reference appears better supported to me. This appearance might be inaccurate, i.e. overall there may be more speaking in favor of keeping classical logic than in favor of accepting the unrestricted T-schema and self-reference, but the appearance matches the rigidity of the attitude (except in cases of epistemic akrasia). The level of rigidity usually also correlates with the degree of certainty that one feels with respect to the attitude, i.e. the feeling that one got it right with respect to which attitude one ought to have.

It is crucial that assent-rank and rigidity are independent of one another. If they weren't, we couldn't make sense of the fact that we can infer to the suspension of judgment regarding the premise of an argument, though we previously believed it along with the other premises, because we are firm in our suspension of judgment regarding the conclusion of the argument. I can, e.g., come to suspend judgment about whether God revealed the Koran to Mohamed, even though I might have initially believed it, by inference from my firm suspension of judgment regarding whether God exists. So, an attitude of lower assent-rank must be able to in some sense “dominate” an attitude of higher assent-rank. Hence, we need at least two dimensions along which attitudes can vary.

#### **4.3.6 Rigidity at Work**

With the notion of rigidity in place, we can return to the topic of inference. We want to understand how inference can be a way of arriving at a particular attitude toward the conclusion of the inference. Translated into my technical terminology, the question is this: How do forces at the inferential level and forces at the sub-inferential level interact? Our first answer was that attaching an inferential force brings the sub-inferential forces that attach to the premises and the conclusion to form a pattern that is permitted by the “reason for” relation that underwrites the inference. In the case of dispositive “reason for” relations, however, this leaves open a number of patterns. Merely ruling out certain combinations of attitudes does not explain how we can come to new beliefs, intentions and the like by



making inferences. Why doesn't the act of inferring leave us with a choice between all the combinations of attitudes that are not ruled out? To be sure, if the combination of attitudes the reasoner holds before making an inference is one of the combinations that is ruled out by the act of attaching inferential force, some of the reasoner's attitudes must change. But why do the attitudes change in one way rather than another?

In order to see how the notion of rigidity helps us to answer this question, let's consider the simplest case of inference: one believes a premise and comes to believe a conclusion by inferring it from the premise. If a thinker rigidly attaches doxastic force to a content and much less rigidly denies another content and then the thinker performs the act of attaching an inferential force to an argument with the first content as a premise and the second content as the conclusion, the thinker will thereby attach doxastic force to the conclusion. That is, the thinker is changing her mind regarding the conclusion by inferring the conclusion from the premise.

Given the high rigidity of the belief in the premise and the low rigidity of the denial of the conclusion, the act of attaching inferential force is *eo ipso* also an act of attaching doxastic force to the conclusion, i.e. the formation of a belief in the conclusion. My view is not that there are two stages here, the attaching of inferential force to the argument and then the attaching of doxastic force to the conclusion. Rather, the thinker attaches doxastic force by attaching inferential force, just as one is straightening a given part of a string by pulling at both ends of the entire string.

We can now understand how doubting something can be the result of an inference. Suppose I very rigidly doubt that my keys are in any of my pockets and I very rigidly believe that if I haven't forgotten them in the office, the keys must be in one of my pockets. Moreover, suppose I much less rigidly believe that I haven't forgotten my keys in the office. If I now attach dispositive-indefeasible theoretical force to the argument  $\langle \{ \text{I haven't forgotten my keys in the office, If I haven't forgotten my keys in the office, the keys are in one of my pockets} \}, \text{the keys are in one of my pockets} \rangle$ , I will thereby come to doubt whether I really haven't forgotten my keys. As before, the "thereby" is signaling that the formation of this doubt is not a second step.

There is a potential source of confusion here. What I am calling the “conclusion” of the argument to which one attaches inferential force need not be the content regarding which one changes one’s attitude in making the inference. In the example just given, e.g., the conclusion of the argument is “the keys are in one of my pockets.,” but the “result” of the inference is a doubt regarding having forgotten the keys in the office.<sup>29</sup> This means that attaching one kind of inferential force to one particular argument can constitute inferences with different conclusions. This is not a problem because in each particular case we attach an inferential force to an argument comprised of contents to which we have specific attitudes with a specific rigidity (that is: at least to all but one of these contents). Given this context, it will be clear which content in the argument is the content of the “result” of the inference—if an inference is possible in the context.

Note that even with the notion of rigidity, there isn’t always an answer to the question which combination of sub-inferential forces should result from the constraints given by a particular kind of inferential force. Take, e.g., the following argument  $\langle \{ \text{making an omelet, I won’t make an omelet unless I break some eggs} \}, \text{breaking some eggs} \rangle$ . If I deny that I won’t make an omelet unless I break some eggs, there are no constraints given by any inferential force that would rule out any combination of attitudes toward the two contents of the action-descriptions. And this is so no matter how rigid any of these attitudes are. In such a case, we cannot attach inferential force to the argument.

We can attach inferential force to an argument only if the attitudes to some of the contents in the argument and their rigidity settle which attitude will have to be changed if it isn’t already in accordance with the constraints on attitude combinations given by the inferential force at issue. Without this there is, as it were, no leverage point that we could use to exert inferential force. So if there is an act of attaching inferential force, this implies that we are in a situation where the subject has attitudes of suitable rigidity to some of the involved contents in order to settle which attitude will have to be changed (if any).

We can now finally appreciate in what sense making an inference can, e.g., also be an act of judging the conclusion in light of the premises. For we can now understand inference as

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<sup>29</sup> Context usually disambiguates between the two senses of “conclusion.” If it doesn’t, I will use “conclusion of the argument” and “conclusion of the inference” in order to be clear which one I mean.

an act in which an attitude toward a single content gets settled. You can attach inferential force only if you thereby settle your attitude toward one of the involved contents, namely the one with the lowest rigidity, in light of your other attitudes.

INF-F2        The act of attaching an inferential force to an argument is an act of settling one's attitude toward a content, which is part of the argument, in virtue of having particular attitudes with particular rigidity toward the other contents of the argument.

Inferential force and the forces that attach at the sub-inferential level, such as doxastic force, stand in an internal relation. It is part of what it means to be an inferential force that attaching it settles one of the sub-inferential forces, and that it cannot be attached if that isn't possible. But it is also part of the nature of doxastic force that attaching it can be merely an aspect of attaching an inferential force. These forces essentially, and not just accidentally, stand in the relations I began to uncover in this section. Neither belief nor inference can be understood independently from the other.

We know from the previous section that the act of settling one's attitude toward a particular content is also the act of reflectively endorsing one's inference as living up to the norms that govern it. We 'see' how the premises and the conclusion (of the inference) hang together—in an argument—and that in light of our other attitudes, this calls for a particular attitude towards the conclusion (of the inference). In 'seeing' this we 'take' our thereby constituted act to live up to the norms that govern it. But which norms govern the act is determined by the kind of connection we 'see' in the act itself.

### **4.3.7 Inferences Under Suppositions**

I have said that we can attach an inferential force only if our attitudes and their rigidity determine a unique outcome of applying the inferential force to the argument. If this is not the case, that doesn't mean that we cannot make any use whatsoever of the argument at issue in our reasoning. We can do this by making suppositions and reasoning under these suppositions.

In making suppositions we emulate doxastic states that are not the ones we are actually in. The easiest case is the case of belief. If we suppose something to be the case, we temporarily emulate a doxastic state in which we believe the thing in question. And we go on to reason as if we believed it. Now, there are two ways in which we can suppose something to be the case. We can suppose something as actual, or we can suppose it as counterfactual.<sup>30</sup> If we do the first, we—roughly—take all our current beliefs and add a belief in what we are supposing.<sup>31</sup> We then adjust our beliefs roughly in the way we would if we were to find out that the supposition is actually true. In particular, we keep our current evidential situation fixed. If we get rid of a belief, e.g., we must deal with whatever speaks in favor of the belief—we could, e.g., say that the evidence is misleading or that we misinterpreted it or the like. If we suppose that Oswald didn’t kill Kennedy, e.g., we conclude that someone else killed him. And we must then also explain how this fits with what we have heard about the killing, etc. If the resulting doxastic state turns out to lead to contradictions, this is usually a reason to reject the supposition.

When we suppose something as counterfactual, we add the supposition provisionally to our stock of beliefs but we try to adjust them to make room for the truth of the supposition following a principle of minimal mutilation. If we possess evidence that the supposition is not true, we can simply assume this evidence away. If we suppose that Oswald hadn’t killed Kennedy, we can get rid of the belief that Kennedy was killed if that is the best way to make sense of the whole scenario (no matter what news about the events has actually reached us).

There are thorny issues here, but I want to say something general about suppositions. When we suppose that something is the case, we temporarily emulate a doxastic state in which we attach doxastic force to the content in question and do so with maximal rigidity.

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<sup>30</sup> The general idea is familiar from discussions in decision theory (see [Joyce, 1999](#), 195ff.). I shall assume that problems that beset the idea can be solved. Nothing hangs on the details of the distinction in the current context.

<sup>31</sup> There are well-known difficulties with this way of thinking about supposition that have to do with how it is possible to suppose something like that it is raining but I don’t believe it. For if I add this information to my stock of beliefs, I will thereby come to believe that it is raining. This debate would lead us too far afield. Here I can just offer a quick hint: I think the solution must have something to do with the fact that in making such suppositions we are splitting ourselves into two, as it were, and reason about ourselves as about someone else. I keep all my beliefs and add the supposition that it is raining, but I also keep a copy of myself that has just my old beliefs without the supposition. I am then reasoning about the copy of myself and the predicament of the copy who doesn’t believe that it is raining while in fact it is.

To see this, notice that the supposition must be accepted inside the supposition context. To reject the supposition is simply to stop supposing it.

This explains why it can seem that different norms apply to ordinary inferences and to reasoning towards a *reductio*. When reasoning by *reductio*, we infer an absurd conclusion under the scope of a supposition. Usually, it wouldn't be a piece of good reasoning to reach an absurd conclusion. So how can it be a good piece of reasoning when it is done under a supposition? The fact that it usually isn't a good inference if it ends with an absurdity is explained by rational constraints on rigidity. The rigidity of the denial of an absurdity should be higher than the rigidity of almost anything else. So attaching inferential force to an argument with an absurd conclusion (of the argument) should lead us to reach as the conclusion (of our inference) the denial of one of the premises. If we are reasoning under a supposition, however, the rigidity of the belief in the supposition is 'artificially' set to the maximal value. So inside the supposition context, we can infer an absurdity. This then typically leads us to end supposing the proposition in question and to conclude that it must be false. The same norms apply inside and outside the supposition context; supposing merely changes the rigidity of the emulated belief.

One further advantage of this view is that it explains why there are analogs of supposing for other attitudes, such as doubting, suspending judgment, or being reluctant to do something. We can emulate states in which we doubt something, suspend judgment, intend to do something and so forth, and we can "artificially" fix the rigidity of these emulated states to a maximal value.

To see that there really are these analogs, note that even a devout believer, e.g., can put herself into the shoes of an agnostic and emulate a doxastic state in which she doubts the existence of god. She might then reason as follows: "From the perspective of the agnostic, it is really doubtful whether god exists. But if the world has a beginning in time that needs to be explained, then that can only be explained by some sort of god. So it must be doubtful whether the world has a beginning in time that needs to be explained." Of course, you might think that what the theist is doing is to suppose the truth of "It is doubtful whether god exists." It is not easy, however, to see how such an alternative would work for practical attitudes like intentions. Of course, I can suppose the truth of "I intend to do  $\phi$ ," but that

cannot play the same role in inferences as an intention to do  $\phi$ . I can, e.g., emulate a state in which I intend to kill my parents and then reason practically to a concrete plan (thus finding out how I might kill my parents if I ever choose to do so). But if I suppose the truth of “I intend to kill my parents,” I might end up with nothing but the conclusion that (under the supposition) I must have serious psychological problems.

#### 4.3.8 Practically Inferring a Belief

The view put forward in this section has an implication that can seem implausible. It seems that, according to this view, we should be able to arrive at a belief by making a practical inference. To see this, suppose that I very rigidly intend to make an omelet. Moreover suppose that I also very rigidly reject breaking any eggs and that I believe, but not very rigidly, that I won’t make an omelet unless I break some eggs. Can I attach a practical (dispositive, indefeasible) inferential force to the following argument:  $\langle \{ \text{making an omelet, I won’t make an omelet unless I break some eggs} \}, \text{breaking some eggs} \rangle$ ?

It would seem that I can. After all, my attitudes and their rigidity determine a unique result of such an inference: I must infer to a denial of the claim that I cannot make an omelet unless I break some eggs. But that seems crazy. I cannot derive facts about how to cook omelets from my intentions.

First of all, it is worth pointing out that most practical inferences are of the probative and not of the dispositive kind; there are usually many ways of getting something done (e.g. let someone else break the eggs for you). With probative inferences the problem does not arise because they exclude only having a high acceptance of the premises while having a low acceptance of the conclusion.

More interestingly, however, I would like to accept the idea that we can come to believe things in this way. In most cases, this is a kind of wishful thinking, e.g., “Global warming can’t be happening; for otherwise I would have to start saving energy.” I think what makes such cases irrational is not the form of the inference but the irrational rigidity of the practical attitudes involved. The rigidity of my rejecting the option of saving energy shouldn’t be higher than the rigidity of my belief that global warming is happening.

Not all cases of this kind, however, are cases of wishful thinking. Sometimes it is rational to have a practical attitude with a high rigidity. And sometimes this may rationally lead us to certain theoretical attitudes. I think, e.g., that it is rational to infer from my rejection of killing one person to save five (under normal circumstances) that simple versions of utilitarianism must be false. Of course, the belief that I reach in this way is only rational if the rigidity of my rejection of killing one in order to save five is rational. Rejections that are merely based on felt desires usually cannot rationally have that kind of rigidity. As long as the rigidity of the rejection is rational, however, and the rigidity of a potential belief in utilitarianism rationally ought to be low, I see nothing wrong with such an inference.

#### 4.4 ACTIVITY AND SELF-CONSCIOUSNESS

We now have a better picture of the fine-structure of acts of attaching inferential force. Inferential forces give acts of inferring their form, and this happens by the thinker reflectively endorsing the inference as living up to the norms that (thereby) essentially govern it. In making an inference we settle our attitude toward one of the involved contents, which is therefore called the “conclusion” of the inference. So making an inference is to settle one’s view about a topic by seeing this view as permitted—or even required—in light of one’s other views.

In the Kantian tradition, inference is said to be a self-conscious act of spontaneity. Intuitively, there seems to be something importantly right about this. Unfortunately, both parts of this claim are in need of clarification. It is neither immediately obvious what it means for an act to be self-conscious, nor is it clear what “spontaneous” or “active” can mean in this context. In this section, I explain in what sense inference is self-conscious and active, according to the Force Account. This is important because if the Kantian ideas are on the right track, what it means to be an act of the intellect (in a wide sense that includes reason) is to be self-conscious and active. It seems to me that the Kantian ideas are indeed on the right track. Hence, I think that, at this point, the Force Account gives us a window

into what it means to possess reason. In other words, inference can serve as an example on which we can learn what it means for an act to be self-conscious and active.

The goal of this section is to make some progress in this direction. I will begin by looking at the sense in which inference is active, according to the Force Account. Next I will turn to self-consciousness.

#### 4.4.1 Being Active Without Acting

Is inferring an action or is it something that merely happens to us? Some philosophers think of inference as a mental action (Peacocke, 2007; Mele, 2009). Buckareff (2005), e.g., argues that reasoning is an action on the ground that it can meaningfully be tried. Galen Strawson, however, has claimed that we can merely get ourselves into the right mental conditions and then have to wait and see whether reasoning happens to us.

No doubt there are other such preparatory, ground-setting, tuning, retuning, shepherding, active moves or intentional initiations. But action, in thinking, really goes no further than this. The rest is waiting, seeing if anything happens, waiting for content to come to mind, for the ‘natural causality of reason’ to operate in one. This operation is indeed spontaneous, but in the sense of ‘involuntary, not due to conscious volition.’ There is I believe no action at all in reasoning and judging considered independently of the preparatory, catalytic phenomena just mentioned, considered in respect of their being a matter of specific content-production or of inferential moves between particular contents. (Strawson, 2003, pp. 232–233)

Kieran Setiya (2013) has argued for a similar view. Setiya holds that the only senses in which inference (as well as belief) can count as active are very modest and, so, we should accept what he calls a “deflationary reading” of “active” in connection with inference. Setiya’s model for (more than modest) activity is the sense in which we are active when we act intentionally. And he argues that we don’t find anything like this in the doxastic domain.

Setiya’s idea that intentional action must be the model on which to understand activity and to which we must compare something in order to see whether it is active is implicitly shared by many writers on the topic (Mele, 2009; Peacocke, 2007; Buckareff, 2005; Strawson, 2003; Proust, 2001). This comes out in the fact that these authors see as the paradigm of an activity an occurrence that is caused—in a non-deviant way—by the agent taking something as her reason for the act, where the agent can meaningfully be said to try to perform the act. If we accept this idea, the question whether belief is active turns into the question whether



we can make belief fit this template: Is a belief caused by the agent taking something as her reason to hold the belief in question? Can you try to believe something?

It seems to me that this way of approaching the issue is not helpful. After all, why should the kind of activity we find in intentional action be the only kind of activity we can understand? Moreover, it follows from the Force Account that inference is neither an occurrence that is caused by the agent taking something as her reason to make the inference, nor is inferring something that we can try. So if intentional action is the model against which we assess whether something is active, then inference is clearly not active. But that is the result of a rather narrow notion of activity.

If we reject the idea that activity must be understood on the model of intentional action, this raises the question what “active” could mean. The first thing to notice is that independently from anything having to do with inference or belief, we need a notion of “active” that is not modeled on intentional action. For, we need a sense of “active” in which something can be active without being caused by an intention to do it. Otherwise there must be intentions that are not active, on pain of there being an infinite chain of intentions in which one causes the next. But if we are not active in intending to do something, it is difficult to see how we could be active in carrying out the intention. If we merely found ourselves with intentions as we find ourselves with bodily desires, the sense in which we would be active in carrying out these intentions would be very limited. It would be like following orders given to us from elsewhere. Hence, we must be active in intending something, and this cannot mean that our intention is non-deviately caused by another intention. And what goes for intention also goes for taking something as one’s reason. Hence, there must be a sense of “active” that doesn’t fit the template of the activity in intentional action. However, this sense of “active” turns out to be tricky to pin down.

Matthew Boyle (2009) and Pamela Hieronymi (2009) have tried to spell out this sense of “active” in similar terms. Both say that there is a special sense in which we control our own attitudes, such as our beliefs and intentions.<sup>32</sup> Hieronymi describes this kind of control as follows:

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<sup>32</sup> John Gibbons (2009) has also presented a view along these lines.

[I]f you become convinced that  $p$ , and so settle for yourself the question whether  $p$ , you therein, *ipso facto*, believe  $p$ . Likewise, if you settle (positively) the question of whether to  $\phi$ , you therein, *ipso facto*, intend to  $\phi$ . Moreover, if you change your mind about whether to  $\phi$ , or about whether  $p$ , in such a way that you are no longer committed to  $\phi$ -ing or to the truth of  $p$ , then you no longer intend to  $\phi$  or believe that  $p$ . We might say that we control these aspects of our minds because, as we change our mind, our mind changes—as we form or revise our take on things, we form or revise our attitudes. I call this exercising *evaluative control* over the attitude. (Hieronymi, 2009, pp. 139–140)

Boyle explains his similar notion of *intrinsic control* thus:

I suggest, that is the crux of rational agency, generically understood: where my present endorsement of  $X$ -ing is the ground of my present  $X$ -ing, in virtue of a capacity I possess to be through the former the source of the latter, there I am the agent of my  $X$ -ing, and  $X$ -ing is my act. Thus my presently representing  $A$  as to-be-done, in actualization of a capacity to do what I represent as to-be-done, is the ground of my presently  $A$ -ing. And thus my presently representing  $P$  as to-be-believed, in actualization of a capacity to believe what I represent as to-be-believed, is the ground of my presently believing that  $P$ . [...] And where I exercise this sort of capacity, I should surely count as an agent: in both cases, I am the ground of the present actuality of something through endorsing the actuality of that sort of thing. (Boyle, 2009, pp. 141–142)

If that is what we mean by “active,” inference must surely count as active, according to the Force Account. After all, on this account, I am inferring by reflectively endorsing my inference as correct, in virtue of a capacity to make inferences. And we may say that I do this by settling the question whether the inference is good, where this means attaching an inferential force to an argument, which settles the attitude I have to one of the contents in the argument, given the rigidity of my attitudes toward the other contents.

The Force Account obviously fits well with Boyle’s idea of intrinsic control, and I think that Boyle is basically right. We must make sure, however, that we understand the view in the right way. For it can seem as if, according to Boyle and Hieronymi, the endorsement of an act or the settling of a question is the efficient cause of the act. One might say, “Sure, the endorsement is also constitutive of the act, but I enjoy the act *because* I endorse it. So my endorsement causes the act.” Or as Boyle would put it: it is the ground of its existence. Saying something like this is dangerous because we must keep firmly in mind that the “because” is signaling a formal cause and not an efficient cause.

To see the danger, let’s turn to a recent proposal by Conor McHugh. He says that “we exercise attitudinal control when we revise our attitudes by responding directly to reasons.

How do we do this? In the paradigm case, we do it by reasoning” (McHugh, 2015, p. 12). And including the non-paradigmatic cases, he says that we should “count attitudes as under attitudinal control if they are held through reasoning, or at least are disposed to be reaffirmed or revised through reasoning” (McHugh, 2015, p. 13). It is natural to think that reasoning is a way of settling a question and to arrive at the endorsement of a belief. Hence, McHugh’s proposal seems to be—at least broadly—in agreement with those of Hieronymi and Boyle.

Notice, however, that while inference—as I describe it—is under our ‘control’ according to Boyle’s notion of intrinsic control, it is not under our control, according to McHugh’s notion of attitudinal control. After all, we cannot arrive at an inference as the conclusion of another inference. We don’t control our inferences by inferring as the result of reasoning. And even if it were possible, which it is not, to make an inference as the conclusion of a piece of reasoning, we couldn’t control all of our reasoning in this way—on pain of a vicious regress.

The problem arises because McHugh thinks of controlling something as analogous to (efficiently) causing something. Reasoning, it seems, can cause an attitude. So reasoning may be a way of controlling our attitudes. But that means that reasoning isn’t under our control. This seems unacceptable. If we are not controlling our reasoning, how can we control our attitudes by reasoning?

The Force Account—in contrast to McHugh’s account—allows us to say that inference is active in Boyle’s sense of intrinsic control. For on the Force Account, the reflective endorsement of an inference is the form of the inference. So the endorsement is the formal and not the efficient cause of the inference.

An opponent may ask why something whose form is the endorsement by the agent should thereby count as active. After all, if something is not already an activity, adding the thought that it is a good thing that it happens doesn’t turn it into an activity. Why does the fact that the endorsement is the form of the act make any difference? It makes a difference because it allows us to see the act as something whose existence implies that it is in immediate rational tension with other acts and attitudes from the perspective of the subject herself. By its very nature—its form—and from the perspective of the subject herself the act is one that must rationally fit together with the rest of the subject’s view on how things stand and what she

should do. In this sense, the subject is invested in the act even from her own perspective. And this investment makes the act vulnerable to rational pressures, as they appear from the perspective of the subject. That is the sense in which the act is active. If the opponent thinks that more is required in order to count as active, the disagreement is no longer a substantive but a merely verbal one.

The upshot of all this is that the Force Account can give us new insights into the sense in which manifestations of the intellect are active. In particular, it brings out clearly that the endorsement from the perspective of the subject should be understood as a formal and not as an efficient cause. The sense in which an inference is active is that it is made into the kind of thing it is and unified by the reasoner's endorsement. This should count as an activity on the part of the reasoner because it makes inferences immediately subject to potential rational tensions as they appear to the subject.

#### 4.4.2 Self-Consciousness

In the Kantian tradition, acts of the intellect are understood as essentially self-conscious acts. Unfortunately, it is notoriously difficult to understand what it means for an act to be self-conscious. Here again the Force Account is well-placed to point the way to an understanding of what could be meant by “self-consciousness.” In order to see this, let's begin with a recent Kantian proposal due to Sebastian Rödl (2013; 2007).

Rödl (2013, p. 215) suggests that inference can be helpfully described as the unity of the following three elements or facts:

1. Dependence of judgments: I judge  $B$  on the basis of  $A$ .
2. Consciousness of dependence: I am conscious of judging  $B$  on the basis of  $A$ .
3. Consciousness of justification: I recognize  $A$ , the ground on which I judge  $B$ , as a ground.

If we think of consciousness of justification as ‘taking’ one's inference to be good and think of the dependence of judgments as what I call “making the inference,” the Force Account agrees with Rödl in identifying the first and the third element. Though I would prefer to say that the consciousness of justification is the form of the dependence of judgments. After all, I hold that the attachment of inferential force gives the inference its form. So Rödl

and I agree that we make an inference by ‘taking’ the inference to be good, which he calls “recognizing the premise as a ground.”

Now, Rödl wants to capture the self-conscious nature of inference by the second element. But how is consciousness of oneself as inferring related to the first and the third element? Here is what Rödl has to say about the relation.

I would not judge *B* on the basis of *A*, did I not recognize *A* as providing a sufficient ground for judging *B*; and, recognizing *A* as a sufficient ground for judging *B*, is (must be able to be) sufficient for judging *B*. Moreover, this necessity and this sufficiency is not the object of a hypothesis. It is not that I found, by frequent observation, that, whenever I recognize that *A*—something I know—establishes *B*, I judge *B*. [...] Rather, I understand this necessity and this sufficiency in the very consciousness in question. So the first element is identical with the third, and this identity is understood in the third element. Therefore, the third element is identical with the second: since recognizing my ground as ground not only is the same as judging on this ground, but an understanding of this identity, recognizing the ground on which I judge as ground is being conscious of judging on this ground. (Rödl, 2013, p. 215)

So we need to acknowledge the second element, according to Rödl, because in recognizing something as a ground and thereby making an inference, the subject understands that she is making the inference by recognizing her premise as a reason to believe the conclusion.

What Rödl says may be correct, but the argument he gives for it is obscure. He seems to suggest that the fact that we all know that we judge that *B* on the ground that *A* just in case we see *A* as providing sufficient reason for judging that *B*, and that this knowledge is not the result of frequent observation, support the idea that we cannot judge that *B* on the ground that *A* without being conscious of doing so. The idea seems to be that if we weren’t always conscious of our inferences, we couldn’t know that we judge that *B* on the ground that *A* just in case we see *A* as providing sufficient reason for judging that *B*. But that seems wrong. After all, why shouldn’t we be able to acquire this knowledge by being conscious of the connection between judging that *B* on the ground that *A* and seeing *A* as providing sufficient reason for judging that *B* in the cases in which we are conscious of making the inference? Compare the case of belief: I know that believing something is ‘taking’ it to be true because this is obvious to me from cases in which I consciously believe something. That does not mean, however, that unconscious beliefs are impossible. The mere fact that we can

understand that an act is constituted by a reflective endorsement does not mean that we must be aware of all instances of the act.

At this point, Rödl might say that he doesn't mean to say that we must be aware of each and every inference that we are making, but that inference is the kind of thing that can be brought to consciousness. But that runs the risk of depriving the second of Rödl's three elements of any substantive meaning. We would need some independent grip on what it means to be conscious of judging *B* on the basis of *A*, and none seems forthcoming.

The Force Account offers a better explanation of the sense in which inference is self-conscious. We make inferences by 'taking' our inferences to be good. Whether or not an inference is good, however, depends not only on the contents that are involved. It also depends on the particular evidential situation of the subject, the rigidity and assent-rank of her attitudes, the presence of defeasors, and the kind of inferential force involved. In 'taking' her inference to be good, the subject is 'taking' all the factors to come together in the right way. What this means is that it is transparently irrational, from the subject's perspective (once she acquired the required concepts), to make, e.g., a dispositive defeasible inference from a belief in *A* to a belief in *B* while believing any of the following: "The rigidity of my rejection of *B* should be higher than the rigidity of my acceptance of *A*," or "No matter what else turns out to be true *B* must be true if *A* is true," or "Such-and-such a defeating content is true," or "My confidence in *A* is unjustified; I should suspend judgment," or "I really shouldn't believe that *B* on the ground that *A*," etc. But enjoying an act that is in transparent rational tension with all these other acts amounts to something that we might call a "consciousness of oneself as inferring," insofar as the inference itself is conscious. In fact, I submit that what it means that inferences are self-conscious acts is precisely that.

Inferences are acts that are transparently incompatible with all these other acts and attitudes. Being conscious of 'taking' one's inference to be good is to be conscious of something that is transparently in rational tension with these other acts and attitudes. But this something can only be the inference one is making; nothing else has this profile of transparent incompatibilities. That is the sense in which one cannot 'take' one's inference to be good without being conscious of one's inference: one must indirectly 'take' oneself to be making the inference, by 'taking' one's inference to be good.

This account of the self-consciousness of inference is not only better motivated than Rödl’s account, it fits better with the Kantian motivation. For on a Kantian view the self-consciousness constitutive of judgment is a consciousness of the judgment as objectively valid (see, e.g., [Kant](#), AA 11, p.347). The same should hold for inference. Hence, the self-consciousness present in inference should be a consciousness of the inference as correct. Rödl tries to secure this connection, but for him the self-consciousness is only needed in order to explain our knowledge of the identity of his first and his third element. On the Force Account, by contrast, the self-consciousness present in inference is precisely what the Kantian should want it to be: a consciousness of the inference as correct. Sure, Rödl claims that all three elements are identical, but his reasons for introducing the second are not the ones that should motivate a Kantian.

Notice that this allows us to say that there are unconscious inferences. After all, we can say that there are unconscious beliefs and still hold that believing something is ‘taking’ it to be true. We just have to say that the ‘taking’ true is as conscious or unconscious as the belief itself. Similarly, we can say that there are unconscious inferences and still hold that in making an inference you (indirectly) ‘take’ yourself to be making the inference. We just have to say that the ‘taking’ is as conscious or unconscious as the inference itself.

To sum up, the Force Account gives us new insights into the sense in which acts of reason are active and self-conscious. It points the way to the correct understanding of Boyle’s notion of activity by highlighting that the reflective endorsement is not an efficient but a formal cause of the act. And it gives us a notion of self-consciousness on which an act being self-conscious is for the subject to indirectly ‘take’ herself to be enjoying the act in virtue of the fact that she ‘takes’ her act to live up to the norms that govern it.

#### 4.5 EXPLAINING IMP AND *JEMEINIGKEIT*

I said at the beginning of this chapter that my account must have at least the following two properties: First, it must explain the Inferential Moorean Absurdity and the *Jemeinigkeit* of inference. Second, it must have fruitful applications in fields where the nature of inference is

relevant. In this section, I want to show that my account explains the Inferential Moorean Phenomenon and the *Jemeinigkeit* of inference. I will end the chapter with a discussion of the Sophistication Objection in the next section. The following chapters will then be applications of my account and will show that we can make fruitful use of the account in epistemology and practical philosophy.

#### 4.5.1 Explaining the Inferential Moorean Phenomenon

To explain the Inferential Moorean Phenomenon is to explain why it is absurd—that is, transparently irrational from one’s own perspective—to make an inference one believes to be bad. According to the Force Account, we make an inference by ‘taking’ it to be good. So at the most superficial level the explanation is that the Inferential Moorean Absurdity occurs because it is transparently irrational from one’s own perspective to ‘take’ something to be the case and also to believe that it is not the case.

That seems like a straightforward explanation. If you take two obviously incompatible things to be the case, you are irrational and transparently so from your own perspective. Moreover, this explanation fits the phenomenon because the absurdity seems to arise from a clash between the belief and the inference. The absurdity seems ‘contradiction-like’ in that the belief and the inference embody incompatible ‘views’ regarding how things hang together. The explanation in terms of ‘taking’ captures that.

If we dig a bit deeper, however, we can realize some peculiar facts about this explanation. The best way into this is probably via a parallel with a recent debate in metaethics. Mark Schroeder has argued that expressivists are not entitled to say that there is a primitive inconsistency<sup>33</sup> between, e.g., disapproving of murder and tolerating murder. He asks us to

... compare just how different this kind of inconsistency would be, between disapproval of murder and tolerance of murder, from the familiar kinds of inconsistency for which expressivists have good models elsewhere. All of the other good models of inconsistency between mental states arose in the case of inconsistency-transmitting attitudes [i.e. attitudes that are inconsistent just in case their contents are inconsistent]. They were all cases of the same attitude toward inconsistent contents. Call this *A*-type inconsistency. *A*-type inconsistency is relatively easy to explain, because to explain it all that you need is a general fact about

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<sup>33</sup> I would prefer the term “incompatibility” to “inconsistency” for what Schroeder wants to express, but I shall go along with his terminology here, for the sake of making the connection to his ideas obvious.



an attitude type (that it is inconsistency-transmitting) and an easy claim about their contents (that they are inconsistent). But tolerance of murder and disapproval of murder are two distinct and apparently logically unrelated attitudes toward the same content. Call this *B*-type inconsistency. *A*-type inconsistency is something that we should all recognize and be familiar with. It happens with beliefs, for example. But *B*-type inconsistency is not something that expressivists can take for granted, because there are no good examples of it. (Schroeder, 2008, p. 48)

In response to this, several expressivists have argued that there is nothing wrong with *B*-type inconsistencies, that there are good examples of it, and that everyone ought to accept their existence (e.g. Gibbard, 2012).

At first sight, it may appear that, in arguing for the claim that we must ‘take’ our inferences to be good in Chapter 2, I have assumed that there are only *A*-type inconsistencies. Indeed, McHugh and Way (2016, p. 7) think that defenders of Boghossian’s Taking Condition don’t realize that “[h]aving contradictory beliefs is not the only way to be highly irrational.”

It is easy to see that this is not what is going on. After all, I explicitly argued that the ‘taking’ involved in inference is not a belief. Hence, the incompatibility between the ‘taking’ and the belief that the inference is bad cannot be an *A*-type inconsistency. The ‘taking’ commits the reasoner to the goodness of her inference, and her belief commits the reasoner to her inference not being good. So she is committed to incompatible contents. But the source of this is not that the reasoner has one kind of attitude towards incompatible contents.

In fact, the incompatibility that explains the Inferential Moorean Phenomenon is neither an incompatibility between attitudes of the same kind toward inconsistent contents, nor is it a case of incompatible attitudes toward the same content. It is an incompatibility of an attitude and an act—belief and inference—that have not only different contents but contents of entirely different form—propositions vs. arguments. Let’s call it a *C*-type inconsistency.

The ‘taking’ involved in inference is not an attitude toward a content in any way like belief, judgment, intention, or the like. The latter are all cases of attaching a particular kind of force to a particular content. The ‘taking’ involved in inference, however, is the act of attaching force itself. It is not to be analyzed into a content and a special kind of force, the force of ‘taking’ something to be the case. Of course, ‘takings’ seem to be propositional attitudes. After all, I say that the reasoner ‘takes’ it to be the case *that* her inference is good,

and that surely looks like the ascription of a propositional attitude. At this point, however, what we should say about “good inference” is analogous to what Frege says about “true.”

[T]he word “true” seems to make the impossible possible: it allows what corresponds to the assertoric force to assume the form of a contribution to the thought. (Frege, 1979, p. 252)

Saying that someone ‘takes’ her inference to be good is to let what corresponds to inferential force appear as a content to which the reasoner has an extra attitude.

This idea may seem strange to many philosophers. In fact, however, the phenomenon is ubiquitous and we are all familiar with it—not only from the case of inference but from many other cases as well. In believing something we ‘take’ it to be true and justified. In hoping for something we ‘take’ it to be something that would be desirable or in some way advantageous. In intending to do something we ‘take’ it to be something that we have good reason to do. In adoring something we ‘take’ it to be worthy of our adoration. And so forth. If you add a belief in the negation of what is ‘taken’ to be the case in such acts to the act, you always get a *C*-type inconsistency. Thus, my explanation of the Inferential Moorean Phenomenon is unifying in that analogs of it apply in all these cases.

#### 4.5.2 Incompatibility Without Inferential Role

Before I turn to the explanation of the *Jemeinigkeit* of inference, I would like to point out one interesting feature of the incompatibilities I mentioned in the previous subsection: These are incompatibilities that don’t correspond to inferential roles.

In order to see what I mean, recall that attaching a particular kind of inferential force to an argument excludes certain combinations of attitudes toward the premises and the conclusion of the argument. These excluded patterns of attitudes describe the inferential role of a content. If we just focus on belief and denial in dispositive-indefeasible inferences, we can say that a set of premises implies (in the dispositive-indefeasible way) a conclusion just in case attaching dispositive-indefeasible force to the corresponding argument excludes believing all the premises while denying the conclusion.

Similar ideas are familiar from many logical frameworks. For bilateralism, this is obvious. After all, bilateralism holds that we should understand “ $\Gamma \vdash \Delta$ ” as saying that it

is impermissible—or out of bounds, as they say—to assert everything in  $\Gamma$  while rejecting everything in  $\Delta$ . In model theory, we say that an argument is valid just in case there is no model that is a model of all the premises without being a model of the conclusion. In possible world semantics, we say that an argument is valid just in case there is no possible world in which all the premises are true but the conclusion is false.

What we are trying to do when we say such things is to read off the inferential role of a proposition (in the sense of what it implies and what is implied by it) from the incompatibility relations between contents. The general idea is that  $B$  implies  $A$  just in case the negation of  $A$  is incompatible with  $B$  (with suitable generalizations for multiple formulae at either or both ends). The differences between the different accounts just mentioned don't concern this basic idea but the way in which “incompatible” is understood. Bilateralism understands incompatibility in pragmatic-normative terms; model theory understands it in terms of interpretation-functions; and possible world semantics understands it in terms of non-compossibility.

However we understand incompatibility, there is usually something like the idea involved that there is something wrong with believing incompatible contents. In the very least, it seems plausible that in order to check whether any formal reconstruction of incompatibility is adequate, we must draw on our intuitive understanding of what we can rationally believe at the same time. Simplifying and speaking very roughly, what we are doing in all these projects is, ultimately, to read off the inferential roles of beliefs from the rational tensions between various beliefs. Roughly speaking, the underlying idea is that, given suitable circumstances, you can infer  $B$  from  $A$  if you cannot rationally believe that  $A$  and that *not-B*. On this picture, relations of rational inferability and rational incompatibility are two sides of the same coin.

Now, I have said that the ‘takings’ involved in inferences and other acts of reason are incompatible with the denial of the claim that the act does not live up to the norms that govern it. Suppose that such incompatibilities always define an inferential role that can be exploited in actual inferences. It would follow that we can infer the ‘taking’ involved in an act from the claim that the act lives up to the norms that govern it, and *vice versa*. But

that is impossible. As we will see in the next subsection, ‘takings’ cannot be inferred from anything. After all, a ‘taking’ is the form of an act and not an act in its own right.

This means that the incompatibility relation among ‘attitudes’ (where we now include ‘takings’) and their relation of inferability (given certain rigidities) come apart. ‘Takings’ are incompatible with many other acts and attitudes, but cannot play the role of premise- or conclusion-attitudes. Given that incompatibility and inferability are so often seen as two sides of one coin, this is a striking fact.

I believe that this feature is characteristic of the reflective endorsement that constitutes acts of reason, such as inference. These endorsements or ‘takings’ enter into incompatibility relations without entering into inferability relations; they can be incompatible with acts and attitudes without being inferable from any acts or attitudes—except insofar as the thinker infers the act or attitude that is constituted by the endorsement. ‘Takings’ differ in this respect from beliefs, judgments, intentions, doubts, rejections, and perhaps even acts of wondering. For these acts can occur as premise- or conclusion-attitudes in inferences, and they can also stand in rational tension with each other. ‘Takings’ can only play the second of these roles; they can only stand in rational tension with other acts and attitudes.

One way of putting this is to say that ‘takings’ are excesses of incompatibility. A belief that  $P$ , e.g., is in rational tension with any belief in anything that is incompatible with the content  $P$ , i.e. everything that implies *not- $P$* . But the belief that  $P$  is also in rational tension with the belief that one’s belief that  $P$  is not justified. This rational tension is not explained by the content of the belief. Rather, it is explained by the fact that believing that  $P$  is ‘taking’ this belief to live up to the norms that govern it, including the norm that it ought to be justified. We introduce the ‘taking,’ as it were, to explain the excess of incompatibility, i.e. the rational tensions that are not explained by the content assigned to the belief in virtue of its inferential role. Another way of putting this is to say that the reflective endorsement that constitutes acts of reason leads to a surplus in rational tension relative to the inferential potential of the act.

This gives us another window into the nature of acts of attaching force, i.e. ‘takings’ or reflective endorsements. These are things that can create immediate rational tensions between our acts of the intellect without being the kind of thing with which we reason.

Inference is the extreme case of this phenomenon, and that is why it comes out so clearly in the case of inference. As we shall see momentarily, inferences don't have any inferential roles; they have no inferential potentials. The reflective endorsement that constitutes them, however, gives them nevertheless a potential for entering into relations of rational tension. This is what we witness in the Inferential Moorean Phenomenon.

### 4.5.3 Explaining the *Jemeinigkeit* of Inference

Recall that by “*Jemeinigkeit* of inference” I mean the fact that the ‘taking’ involved in inference cannot be acquired merely on the basis of testimony, reasoning, or perception.<sup>34</sup> The reasoner must ‘see’ for herself how the premises and the conclusion hang together. Nothing that doesn’t enable the reasoner to ‘see’ this can be a way of arriving at the kind of ‘taking’ at issue. And neither testimony nor reasoning or perception can guarantee that the reasoner ‘sees’ how her premises and her conclusion hang together. Can the Force Account of inference explain this phenomenon?

Let’s begin by focusing on the question why ‘takings’ cannot be acquired by accepting testimony. The Force Account explains why inferential ‘takings’ cannot be transmitted via testimony. What is transmitted via testimony is a propositional content, and in good cases the recipient also acquires justification for believing this content. An act of attaching force, by contrast, cannot be transmitted via testimony. Perhaps the point is clearest when we move from inference to the attitude of intending to do something. Suppose, for the sake of argument, that intending is constituted by a ‘taking-to-be-a-rational-action,’ where this is a characterization of a particular force. It is clear that accepting testimony to the effect that something is a rational action does not amount to forming the corresponding intention. The ‘taking-to-be-a-rational-action’ that constitutes an intention cannot be acquired via testimony. In general, ‘takings,’ i.e. acts of attaching a particular force, aren’t the kind of thing that can be enjoyed by accepting testimony.

We can, of course, form a judgment by accepting testimony. This does not mean, however, that the ‘taking true’ that is the act of attaching doxastic force was transmitted via testimony.

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<sup>34</sup> These claims need to be qualified in the way indicated in Chapter 3. For the sake of simplicity, I shall sometimes leave these niceties implicit.

If you tell me “It is true that  $P$ ” and I accept your testimony, I thereby form the judgment that it is true that  $P$ . In attaching doxastic force to this content, I ‘take’ it to be true that it is true that  $P$ . I do not judge that  $P$  by (merely) accepting your testimony that it is true that  $P$  (or perhaps better: I do so only insofar as this is implied by me judging that it is true that  $P$ ). So what you have transferred to me via testimony is not the ‘taking true’ that is constitutive of a judgment that  $P$  but the content of my ‘ground-level judgment’ that it is true that  $P$ .

Exactly parallel things can be said about arriving at ‘takings’ via reasoning or perception. I cannot reason my way to the ‘taking-true’ that partly constitutes the belief that  $P$  other than by reasoning my way to the belief that  $P$ . I cannot reason to the ‘taking-to-be-a-rational-action’ that partly constitutes an intention other than by reasoning in a way that concludes in forming the intention. And the same holds good for perception as well. I cannot arrive via perception at the ‘taking-true’ that partly constitutes the belief that  $P$  other than by forming the perceptual belief that  $P$ .

The general pattern is this: if I try to form a ‘taking’ by testimony, inference, or perception (other than by forming the attitude constituted by the ‘taking’ directly), I end up with a belief to the effect that a certain act would live up to the norms governing it, e.g., I end up with the belief that the belief that  $P$  would be true, or with the belief that doing  $\phi$  would be a rational action. But such beliefs are not the ‘takings’ that constitute other beliefs or intentions. Rather, they are constituted by their own ‘takings,’ such as a ‘taking’ that the belief that the belief that  $P$  would be true is true.

So the Force Account offers an explanation of the *Jemeinigkeit* of inference that unifies the phenomenon with analogous phenomena that arise for beliefs, judgments, intentions, and the like. The reasoner must ‘see’ the connection between her premises and her conclusion for herself just as she must herself ‘take’ her beliefs to be true.

At this point, a worry like the following may arise: Perhaps I cannot arrive at a ‘taking’ in any other way than by arriving at the act or attitude the ‘taking’ constitutes and this explains, e.g., why I cannot ‘take’ an inference to be good in any way other than making the inference. But why can’t I simply make the inference on the basis of testimony? After all, I can form a judgment on the basis of testimony, and in this indirect way I can arrive at

a ‘taking-true’ on the basis of testimony. True, I cannot just arrive at the ‘taking-true’ in isolation; I can only get to it by forming the judgment; but in the case of inference I cannot arrive at the ‘taking-to-be-a-good-inference’ even in this indirect way. Why is that?

The explanation of this further fact, I think, is that inferences cannot be based on anything; we cannot infer for reasons.<sup>35</sup> If we form a belief, judgment, or intention on the basis of testimony, reasoning, or perception, we have reasons for holding the belief, judgment, or intention in question. These acts or attitudes are based on the testimony, the premises of the reasoning, or the perception. That is not possible in the case of inference. This is why it is not only impossible to form the kind of ‘taking’ involved in inference directly on the basis of testimony, but it is also impossible to form it indirectly on the basis of testimony by making an inference on the basis of the testimony.

In order to be clear what I am saying here, let’s take the most promising candidate for something on the basis of which one might think one could make an inference: a belief in some suitable conditional or appropriate relation between the premises and the conclusion. Indeed, it can sometimes seem to happen—e.g. in mathematics—that we first figure out that some inference is good and so come to believe a suitable conditional; and then we make the inference on this basis. I claim that this cannot in fact happen. What can occur is any of the following scenarios:

- (a) One might come to believe the conditional and then use it as a premise. In this case, your inference has the following shape, “*A*, and this implies that *B*. So *B*.” This reasoning can also occur, as it were, at a meta-level. In that case, the inference might look as follows: “*A*. So ‘*A*’ is true. Every situation in which ‘*A*’ is true is one in which ‘*B*’ is true. So ‘*B*’ is true. So *B*.”
- (b) It can happen that in figuring out that the conditional is true, one comes to ‘see’ how the premises and the conclusion hang together. The most obvious example of this sort of case is the one in which we infer the conditional via conditional proof.
- (c) It can happen that I don’t really make the inference in question but merely come to believe that it is correct. This happens naturally, when you figure out that

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<sup>35</sup> We can do so in indirect ways, much the way in which we can believe at will in indirect ways. But in such cases we don’t reason to an inference.

an inference is good by using a sequent calculus. You look at the root of your proof-tree,  $A \vdash B$ , and you think “Ah, so that inference goes through.” Since you have in some sense worked your way from the premises to the conclusion, it can seem to you that you thereby actually made the inference. But that impression is misleading.

- (d) It makes sense to infer  $B$  from  $A$  in my situation. I want to know whether  $B$  and I already know that  $A$ . And making the inference is the best way to find out whether  $B$ . When someone asks me “Why do you make this inference?”, I say “Because I need to know whether  $B$  and I already know that  $A$ .”

None of these scenarios is one in which you infer  $B$  from  $A$  on the basis of anything. In case (a) you infer  $B$  from more premises. In case (b), you can immediately ‘take’  $A$  to support  $B$ ; you are not relying on any further basis. In case (c), you are not making any inference that has  $B$  as its conclusion at all. In case (d), you have pragmatic reasons to make the inference. It would be misleading, however, to say that you make the inference for these reasons. After all, you cannot reason practically to making the theoretical inference.<sup>36</sup>

Once we set all these cases to one side, it becomes obvious that it is not even clear what could be meant by saying that someone is making an inference on the basis of such-and-such, where the such-and-such is not giving the premises (and not the ‘taking’). A metaphor might bring out the point. Basing one act or attitude on another is like there being a bridge between the two. And inference is like building such a bridge. But “building a bridge” is not the name of a place to which there might be a bridge. Building a bridge isn’t even the right kind of thing to be such a place. Similarly, inference isn’t even the right kind of thing to be based on anything. Inferences combine and connect other acts and attitudes, but they are not themselves the kind of thing that gets connected or combined into larger units—except, of course, in the form of chains of inferences. I don’t just think that the claim that inferences

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<sup>36</sup> This would not only lead to problems in the neighborhood of believing at will, it would also require that you have already figured out that inferring  $B$  from  $A$  is a way of finding out whether  $B$  (Müller, 1992). But how could you have done that without already making the inference? In case (d), your inference is no more based on the pragmatic reasons than is an idea that occurred to you because you were trying to solve a problem.



can be based on something is false. I find it unintelligible. I don't know what could be meant by it.

Here is an argument that might help to bring this out. If inferences can be based on something, we should be able to infer to inferences. After all, making an inference is the most obvious way to establish a basing relation. But the contents of conclusions of inferences must be able to enter into logically complex contents. If I can infer to a belief that  $P$ , other contents in which  $P$  occurs must exist, e.g., the contents  $P \mathcal{E} Q$ , or  $\text{not-}P$ , or *if  $P$ , then  $Q$* , and so on. And if we can infer to an intention to do  $\phi$ , it must make sense to intend to do  $\phi$  *if  $P$* , or intend to do either  $\phi$  or  $\psi$ , or to intend to refrain from doing  $\phi$ , and so on. After all, one of the ways in which inference fulfills its function is by bringing together various contents, and relating them in logically complex contents is a crucial way of doing that. But, and here comes the kicker, no analogous contents exist for inferences. The contents of inferences—i.e. arguments—cannot be negated, conjoined, embedded in conditionals, or anything else of this sort. What would it mean to conjoin or negate arguments? What act or attitude could we have toward such a content? How should we reason with, say, a conditional whose antecedent is an argument? These questions don't have answers. And it seems plain that this is because such contents simply don't exist. But if inferences don't have contents that can enter into logically complex contents, how can they be the result of inferences? Shouldn't there, e.g., be some analog of *modus ponens* for reasoning to inferences? That is impossible because there isn't anything like a conditional with the content of an inference as its consequent. If inferences cannot be the result of inferences, however, this makes it doubtful whether they can be based on anything. No doubt, we can come up with judgeable and truth-apt contents that we can think of as standing in for arguments; perhaps " $P$  and therefore  $Q$ " could do the job. But these are contents of beliefs and judgments; they are judgeable contents. They are not the contents of inferences. The upshot of all this is that we can see that the idea of an inferred inference is unintelligible by realizing that the idea of contents of inferences entering into logically complex contents is unintelligible.

To sum up, the Force Account offers a compelling explanation of why the 'takings' involved in inference cannot be shared via testimony. These 'takings' are aspects of force and not propositional attitudes in their own right. But acts of attaching force are the wrong

sort of thing to be shared via testimony. At this point one might worry that while the Force Account can explain why ‘takings’ cannot be shared via testimony, it cannot explain why whole inferences cannot be made on the basis of testimony. We have seen, however, that this is explained by the general fact that inferences cannot be based on anything. This fact doesn’t stand in need of any deep explanation because denying it is not merely false but ultimately unintelligible.

## 4.6 THE SOPHISTICATION OBJECTION

Before we turn to applications of the Force Account, there is one lingering problem that needs to be addressed: the Sophistication Objection.<sup>37</sup> The worry is that inference cannot require that the subject ‘takes’ her inference to be good because there are subjects that can make inferences but don’t have the conceptual resources to ‘take’ their inferences to be good.

It is easy to see how this worry arises for views on which the ‘taking’ is a belief. After all, you cannot believe that your inference is good if you don’t have the concept of a good inference. And it may be argued that there are creatures that can make inferences but don’t possess the concept of a good inference. In response to this worry, an advocate of the view that the ‘takings’ involved in inferences are beliefs may try to find a content that only involves concepts that are plausibly possessed by any creature who can make inferences. Perhaps the content of a conditional with the conjunction of the premises as the antecedent and the conclusion as the consequent could fit the bill.

The problem with such a view is that the conditional is too weak. We can realize this by realizing that we can create Inferential Moorean Absurdities in which the thinker accepts the conditional. Such an absurdity arises, e.g., if the thinker holds that she should reject the conclusion of the inference with higher rigidity than the rigidity with which she believes the conjunction of the premises. We can capture such an absurdity in the following schema:

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<sup>37</sup> I will deal with the Regress Objection in Chapter 5.

IMA-R    *A*. Therefore, *B*. But while I believe that if *A*, then *B*, it is clearly much more plausible, given my epistemic situation, that *A* should fail than that *B* should be true.

A thinker whose thoughts can be captured by an instance of this schema is doing something that is transparently irrational from her own perspective. In order to explain this, however, it is not enough to say that in order to make the inference, the thinker must believe the conditional.

An advocate of the view that the ‘taking’ involved in inference is a belief might try to get around this problem by amending her account. She could, e.g., require that the thinker also believes that the truth of the conclusion is more plausible than the falsity of any of the premises. This, however, will bring us back to the Sophistication Objection. After all, the opponent can now argue that there are creatures who can make inferences but cannot believe that the truth of one proposition is more plausible than the falsity of another.

The Force Account offers a way out of this predicament. For on the Force Account the ‘taking’ involved in inference is not a belief. Consequently, it is not obvious that a thinker must possess the concepts *S* and *F* in order to ‘take’ *S* to be *F*. In fact, the Force Account can and should deny this. Hence, the Force Account does not succumb to the Sophistication Objection. You can ‘take’ an inference to be good without having the concept of a good inference, just as you can ‘take’ a judgment to be true without possessing the concept of truth.

An opponent might worry that this makes ‘takings’ too thin to be of any interest. In response, I would first like to point out that these ‘takings’ are interesting because they enter into relations of immediate rational tension with acts and attitudes of the thinker. Such an immediate rational tension can arise even in thinkers who don’t possess the concept of a good inference. The thought that *P* and *Q* have nothing to do with each other, e.g., is in immediate rational tension with the ‘taking’ involved in the inference from *P* to *Q*.

Moreover, there is a plausible requirement concerning concepts in the vicinity. For we can accept the Force Account and get around the sophistication objection while also thinking that what is required is that the thinker can acquire the concepts she needs in order to believe

what she ‘takes’ to be the case merely by drawing on abilities she already possesses in virtue of the acts constituted by the ‘taking’ at issue.

In order to see what this means, it is helpful to again look at the case of judgment first. The concepts of truth and justification are complicated concepts. Hence, it is plausible that there are creatures who can judge that  $P$  but cannot believe that their belief that  $P$  is true and justified because they don’t possess these concepts. Hence, these creatures can ‘take’ something to be true and justified without being able to believe that it is true and justified. So the situation is exactly parallel to the case of inference.

If someone is able to form judgments, however, the ideas of truth and justification cannot be completely foreign to her. She must be able to deal with her environment and the things other people say in a way that shows that she is responsive to considerations that bear on the truth and justification of her judgments. If she perceives that something is not the case, she must be disposed not to judge that it is the case. If she is asked to give reasons for what she believes, she should be able to recognize this as a legitimate request (if we ignore Wittgensteinian hinge-propositions and the like for the sake of simplicity). And if someone presents considerations that imply that things are thus and so and nothing speaks against it, she should be disposed to judge that things are thus and so. And so forth.

The agent can get some initial grip on the notions of truth and justification by drawing on these dispositions and abilities. We can get her to see at least the rough outlines of these concepts by saying things like the following: “If you judge that  $P$ , you should also judge that it is true that  $P$  if the question arises, or else revise your judgment that  $P$ , and *vice versa* (unless someone tells you a story that prominently features someone called ‘the liar,’ in which case you do well to give your interlocutor a blank stare and start looking around for an escape route).” Or: “If someone tells you something that makes you think ‘So  $P$  must be true’ call this a ‘justification’ for the judgment that  $P$ . And if someone asserts that  $P$ , it is fair to ask her for a justification and to expect a response that makes you think ‘So  $P$  must be true.’” And then we can add further refinements to the concepts the thinker is acquiring.

In the case of inference, we can similarly say to our thinker: “Judge that the inference from  $A$  to  $B$  is good if and only if you are disposed to think ‘ $A$ , therefore  $B$ .’”<sup>38</sup> This gives the thinker at least an initial grip on the concept of a good inference. So if the thinker can make inferences, grasping (to some degree) the concept of a good inference is within reach if the thinker can recognize when she is making which inferences.

The upshot of all this is that the Force Account is well-positioned to hold the view that while a thinker need not possess the concept of a good inference in order to ‘take’ an inference to be good, this concept must be within reach—in the sense that the thinker can learn to apply the concept by drawing on the inferential abilities she possesses. So we can not only deflect the Sophistication Objection but we can also say what amount of sophistication is actually required and why this is a plausible amount of sophistication.

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<sup>38</sup> These ideas derive from Robert Brandom’s (2008) idea that the ability to use conditionals can be algorithmically elaborated from the ability to make inferences. For the reasons given a few paragraphs back, I don’t use the conditional but “is a good inference.”

## 5.0 FIRST APPLICATION: INFERENTIAL INTERNALISM

In this chapter, I want to do two things. First, I want to show how the Force Account can be applied in epistemology. In particular, I shall show that the Force Account gives us a novel perspective on inferential internalism. Inferential internalism is the view that in order to be justified in believing the conclusion of an inference, you must be doxastically justified in believing that the inference is good. The Force Account brings out that there is something right about this. The Force Account disagrees with standard versions of inferential internalism, however, in claiming that the reasoner need not believe that her inference is good. The reflective endorsement of the inference is not a belief; it is an aspect of the form of the inference. This allows the Force Account to avoid all standard objections to inferential internalism. In particular, none of the standard regresses that are thought to arise for inferential internalists can arise once we realize that ‘taking’ one’s inference to be good belongs to the form of the inference. It implies, e.g., that we should explain what it means that the ‘taking’ is justified in terms of the rationality of the inference as a whole, and not the other way around, as inferential internalism suggests.

Second, the discussion of inferential internalism will allow me to address the worry that the Force Account leads to vicious regresses. As already intimated in Chapter 2, this regress worry is one of the standard objections to the view that inference involves ‘taking’ one’s inference to be good. The regresses that are claimed to ensue are typically related to Lewis Carroll’s (1895) fable of Achilles and the tortoise. We will have ample opportunity to discuss Carroll’s story in this chapter.

Here is the plan for the chapter: In Section 5.1, I review the debate between inferential internalists and their critics. This will involve reconstructing three different regress objections. In Section 5.2, I show how the Force Account transforms this debate. The result is

a view that is similar in spirit to inferential internalism but that differs considerably in the details. In particular, on the view I shall recommend, you don't need an independent and antecedent justification for believing that your inference is good in order to be justified in believing the conclusion. I will end by briefly taking stock in Section 5.3.

## 5.1 INFERENCEAL INTERNALISM

Whatever else (theoretical) inference might be, it must be something by which we can come to know things if we already know other things. In usual cases, you can come to know something by inference only if you already know the premises of the inference.<sup>1</sup> But that is not sufficient to acquire knowledge. After all, you may be reasoning fallaciously. That can happen even if you end up with a true belief. Inferential internalism is the idea that even if you know the premises and you are not reasoning fallaciously, you may still not come to know the conclusion because you have no justification for holding that your inference is good.

The most prominent version of inferential internalism has been formulated and defended by Richard Fumerton. As most inferential internalists, he thinks primarily about the static phenomenon of believing for reasons. He defines inferential internalism as the view that ...

in order for me to be justified in believing  $P$  on the basis of  $E$ , I must be justified in believing that  $E$  makes  $P$  probable. (Fumerton, 1995, p. 67)

By being “justified in believing” Fumerton means “being doxastically, not just propositionally, justified,” and this is the majority view among inferential internalists (Rhoda, 2012). Fumerton thinks that all good inferences must be underwritten by the relation of “making probable,” but that is not an essential part of the view. Adam Leite has provided a more abstract formulation of a similar idea.

In order for one to have positive epistemic status  $\emptyset$  in virtue of believing  $P$  on the basis of  $R$ , one must believe that  $R$  evidentially supports  $P$ , and one must have positive epistemic status  $\emptyset$  in relation to that latter belief as well. (Leite, 2008, p. 422)

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<sup>1</sup> Unusual cases include inferences with the structure of *reductio ad absurdum* or conditional proof, and perhaps more.

Just like Fumerton's claim, Leite's claim is about believing something on the basis of something else. It is easy, however, to transfer the idea to the case of (dynamic) inference. Samuel Taylor has recently formulated a principle that directly concerns inference.

An application of inference rule  $R$  to justified premises provides  $S$  with justification for believing  $Q$  only if  $S$  has prior justification for believing  $R$  is (conditionally) reliable. (Taylor, 2015, p. 2990)

And Laurence Bonjour says about reasoning:

[A] reasoned or argumentative transition from a claim or group of claims to some further conclusion relies again on there being a good reason for thinking that a conditional claim is true, [...] one having the conjunction of the premises as its antecedent and the conclusion in question as its consequent. (Bonjour, 2005, p. 182)

The general pattern of the idea is clear, I hope. In order to be justified in believing the conclusion, you must hold a justified belief to the effect that some appropriate relation holds between your premises and your conclusion. This idea has received a lot of critical attention. In general, the worry is that either such a view will imply that every good inference must have infinitely many premises, or that one must make another inference in order to justifiedly hold the required belief. Let's look at this debate in a bit more detail before we return to the Force Account and bring it to bear on these issues.

### 5.1.1 The Opening Moves on Both Sides

As we have just seen, inferential internalists hold that in order to be justified in believing the conclusion of one of our inferences, we must justifiedly believe that our premises support our conclusion. There are two kinds of consideration that inferential internalists typically cite as reasons for accepting their view.

- (A) Believing something on the basis of an inference one has no reason to think is good seems epistemically irresponsible (Leite, 2008). This comes out in various examples (Fumerton, 1995):

*Example 1:* Suppose someone makes an inference from  $P$  to  $Q$ , which is in fact good. However, when we ask her why  $P$  is a reason to believe  $Q$ , she just shrugs her shoulders and says "no idea." Her belief that  $Q$  seems unjustified.



*Example 2:* Take someone who makes an inference, which is in fact good, merely because she is under the influence of a post-hypnotic suggestion (Fumerton, 2006, p. 105), and who has no reason to think that her inference is good. The inference could easily have been a bad one without the subject noticing it. And this violates some plausible safety requirement for justification.

- (B) If we reject inferential internalism, we cannot avoid malign cases of bootstrapping (Taylor, 2015). For it seems that if we reject inferential internalism, we can use a rule of inference in order to acquire justification for believing that the rule is reliable. After all, we can use the rule several times to reach results that we are justified in believing to be true. In this way we can establish a positive track-record for the rule.

In order to see more clearly how consideration (B) supports inferential internalism, let's look at an example given by Samuel Taylor, which is a bootstrapping argument for the claim that modus ponens is conditionally reliable, i.e., that it tends to yield true conclusions given true premises.

Bootstrapping on MP

1.  $Q_1$  (Justified by an application of MP to justified premises.)
  2. I formed my belief that  $Q_1$  on the basis of an application of MP to true premises.
  3. Therefore, applying MP to true premises got things right regarding  $Q_1$ .
  4.  $Q_2$  (Justified by an application of MP to justified premises.)
  5. I formed my belief that  $Q_2$  on the basis of an application of MP to true premises.
  6. Therefore, applying MP to true premises got things right regarding  $Q_2$ .
- $\therefore$  MP is (conditionally) reliable. (Taylor, 2015, p. 2992)

We could go through the same kind of bootstrapping for any other rule of inference or kind of inference, including kinds of inference that are clearly fallacious. That is unacceptable.

Inferential internalism provides a safeguard against this kind of reasoning. After all, it tells us that we cannot acquire justified beliefs by performing a particular kind of inference if we don't already have justified beliefs regarding the goodness of each inference, which would presumably give us an independent justification for believing that every inference of the relevant kind is reliable. Moreover, it is at least not obvious on what basis one may criticize bootstrapping reasoning, such as the example just cited, if one rejects inferential internalism.

$$\begin{array}{c}
\text{... and so on } ad\ infinitum \text{ ...} \\
((A \& B) \& ((A \& B) \rightarrow Z) \& ((A \& B) \& (A \& B \rightarrow Z)) \rightarrow Z) \rightarrow Z \\
((A \& B) \& (A \& B \rightarrow Z)) \rightarrow Z \\
A \& B \rightarrow Z \\
\hline
A \& B \\
\hline
Z
\end{array}$$

Figure 3: The original tortoise regress

Those who reject inferential internalism also rely on two main considerations. The first is a version of the Sophistication Objection, which I have already discussed in the previous chapter (see Section 4.6). The second is a family of worries that have to do with various kinds of regresses, most of which are inspired by Lewis Carroll’s (1895) fable of Achilles and the tortoise. Recall that, in the fable, there are two statements,  $A$  and  $B$ , that together obviously imply a third claim,  $Z$ . The tortoise accepts  $A$  and  $B$  and challenges Achilles to force her to also accept  $Z$ . The tortoise asks:

“And might there not also be some reader who would say ‘I accept  $A$  and  $B$  as true, but I don’t accept the Hypothetical [i.e.  $(A \& B) \rightarrow Z$ ]’?” [...] And [... no such reader ...],” the Tortoise continued, “is as yet under any logical necessity to accept  $Z$  as true?” “Quite so,” Achilles assented.” Well, now, I want you to consider me as a reader of [... this] kind, and to force me, logically, to accept  $Z$  as true.” (Carroll, 1895, p. 279)

The tortoise is cooperative enough to accept the conditional,  $(A \& B) \rightarrow Z$ , after Achilles asks her to do so. But now, she points out, she need not accept  $Z$  if she doesn’t accept that  $A \& B$  and  $(A \& B) \rightarrow Z$  together imply  $Z$ . Thus, we are launched on a regress, which is illustrated in Figure 3. This kind of regress suggests that any good inference must have infinitely many premises. But that must be false.

So inferential internalism seems to founder on a Carrollian regress. After all, we can replace the conditional with the claim that an appropriate relation holds between the premises and the conclusion. This objection assumes, however, that the belief that some appropriate relation holds between the premises and the conclusion must play the role of a premise.

Let's grant this assumption for a moment. Is there still a way to avoid the problem? Well, if the belief plays the role of a premise, we are facing a dilemma: either the inference must have infinitely many premises, or the belief must be self-referential. For if the belief is not self-referential and plays the role of a premise, it cannot fulfill the requirement that the reasoner believes that some appropriate relation holds between the premises—i.e. all of them—and the conclusion. Is there a way out if we say that the belief is self-referential?

If the required belief is self-referential its content must, in effect, be equivalent to: “This very premise, together with the other premises, stands in an appropriate relation to the conclusion.” Allowing this kind of self-referential content, however, sets us up for a variant of Curry's Paradox. To see this, first notice that if I suppose something,  $P$ , and can then infer something else,  $Q$ , under this supposition, I should be able to discharge the assumption and infer that  $P$  stands in the appropriate relation to  $Q$ . Next, consider the following content:

$P$              $P$  stands in the appropriate relation to  $Q$ .

We can now reason as follows:

1.            Suppose that  $P$ .
2.            Under this supposition, we can infer that  $Q$ .
3.            We can now discharge our assumption and infer that  $P$  stands in the appropriate relation to  $Q$ .
4.            But what we have now inferred (outright) is identical to the content  $P$ .
5.            So we can infer (outright) that  $Q$ .

Hence, if we allow contents like  $P$  and we can discharge assumptions in the way exemplified in Step 3, we can infer anything whatsoever.

An advocate of this self-referentiality response to Lewis Carroll's regress might, of course, claim that everyone needs a solution to the Curry Paradox and that she is, hence, no worse off than anyone else. This response underestimates how bad the situation is. Notice, first, that our new paradox does not rely on any straightforward version of contraction. After all, we are not detaching from a “stands in the appropriate relation” statement with the help of another premise that is actually identical to it (as in the usual Curry Paradox). Rather, the “stands in the appropriate relation” statement serves as our only premise. Second, you cannot

tinker with any validity-predicate or the like. For it is important that there is not merely an equivalence here (which we could restrict) but an identity of contents. Third, rejecting the discharge-principle I have suggested doesn't really help. After all, the inferential internalist thinks that I must already be justified in believing  $P$  in order to make the inference from 1 to 2. But that inference is a good one by the lights of inferential internalism. Hence, there should better be a way to get to 3. So this response to the tortoise regress makes this version of the Curry Paradox virtually impossible to solve.

### 5.1.2 Achilles Fends Off the Tortoise

This leaves an obvious way out for the inferential internalist. She can deny that the belief about the connection between the premises and the conclusion plays the role of a premise. And indeed, that is the preferred strategy in the literature. Richard Fumerton, e.g., writes:

One straightforward way [to avoid the regress] is to claim that while justified belief in the connecting principle is necessary for justification, the proposition in question should not be treated as a premise. [...] [T]he critic will argue that the proposition asserting a connection between premises and conclusion is starting to look and function just like a premise. If it looks like a premise, and epistemically acts like a premise, how do I expect to get away with arguing that it is not a premise? While I concede the objection has initial force, my answer is intended to be disarmingly simple. I read “What the Tortoise said to Achilles” and I don't want to be in the position of Achilles facing a vicious regress. To avoid Achilles' fate one simply can't treat the connecting principle as a premise among other premises. (Fumerton, 2015, p. 214)

And Valaris asserts in a similar spirit that “the general structure of a successful response to the regress argument is clear: we should simply deny that the role of the belief that one's conclusion follows from one's premisses is to provide one with an extra premiss” (Valaris, 2014, p. 107).

This response is indeed disarmingly simple, but it immediately raises a question: What does it mean to play the role of a premise? The inferential internalist cannot say that playing the role of a premise is to be the content of a belief that the thinker uses and relies upon in her inference such that the thinker's justification for believing the conclusion depends on her justification for believing the content at issue. Since this seems like a plausible first

suggestion for what a premise is, the inferential internalist should have more to say about the distinction she wants to draw between different roles beliefs can play in inferences.

The general strategy of inferential internalists and advocates of similar views at this point is usually to say that the belief about the relation between the premises and the conclusion connects the beliefs in the premises and the belief in the conclusion in the right way. Such a belief is needed “to ensure that the subject mentally connects her premise and conclusion in the way required for inferential justification” (Tucker, 2012, p. 339).<sup>2</sup> One might, e.g., think that such a belief is constitutive of the basing relation that gets established by making an inference. Or one might try to argue that it is necessary for the transmission of justification, or something the like. If a suggestion along these lines can be made to work, we will have defused the threat of the tortoise.

### 5.1.3 The Tortoise Strikes Back

Advocates of the regress worry have a general strategy for putting pressure on accounts of how the belief at issue connects the premise-beliefs and the conclusion-belief: the strategy is to argue that this connecting function requires another inference. If the belief about the connection between the premises and the conclusion cannot play its connecting role without a distinct inference, we are again launched on a vicious regress. There are two strategies for arguing that the connecting belief requires that the reasoner must already have made another inference. Either one argues that arriving at the connecting belief requires the thinker to make an inference. Or one argues that the reasoner cannot use her connecting belief in an inference without making another inference. Let’s look at them in turn.

It seems that in order to be justified in believing that your premises stand in an appropriate evidential or support relation to your conclusion, you must have inferred this belief from other justified beliefs. Kieran Setiya puts the point as follows:

[W]hile there may be general epistemic truths of which we have non-inferential knowledge, it is not rational to take a specific fact—for instance, that the clouds are grey—as evidence for a specific conclusion—that it will rain—except on the basis of dynamic inference. This

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<sup>2</sup> Tucker actually thinks that what is needed is not a belief but a non-doxastic kind of awareness that need not be justified. But what he says here nicely captures the general idea, which can also be applied by more traditional inferential internalists.

$$\frac{A \& B}{Z} \leftarrow \frac{C_1}{A \& B \rightarrow Z} \leftarrow \frac{\dots \text{ etc. } \dots}{C_1 \rightarrow (A \& B \rightarrow Z)}$$

Figure 4: Regress of justification

is not an object of innate belief, or the sort of thing for which one needs no grounds; nor are the grounds perceptual. It is a belief that must derive from other beliefs. (Setiya, 2013, p. 186)

As Setiya points out, if we put this idea together with inferential internalism, being justified in believing the conclusions of one’s inferences becomes impossible. The connecting belief must be acquired by making an inference, which requires another connecting belief, which requires another inference, and so on. You must have already made infinitely many inferences in order to become justified in believing the conclusion of any of your inferences. Figure 4 illustrates the situation.

Various responses have been offered in the literature. Valaris (2014, p. 123) suggests that, in the case of what he calls “basic reasoning,” the connecting belief “has no independent grounds [... and ...] counts as knowledge (when it does) just because one’s belief in  $p$  by reasoning from  $R$  counts as knowledge.” Fumerton (2015, p. 214) thinks that the regress can be avoided if the content of the connecting belief can be known *a priori*. And Leite (2008, p. 437) holds that the connecting belief need not be doxastically but only propositionally justified. According to his view, the belief is formed spontaneously as the result of an ability to recognize when and where the appropriate relation between contents holds. You must have reasons that speak in favor of the belief when you form it, but you need not base your belief on these reasons. Finally, some have suggested that we should revise inferential internalism so as to not require a justified belief but some non-doxastic state, which either need not be justified or can be justified in some other way, such as acquaintance (Taylor, 2015; Tucker, 2012). Laurence Bonjour, e.g., talks about *a priori* insights into the “way that reality in the respect in question *must* be” (Bonjour, 2005, p. 179).

Unfortunately, none of these proposals seems to be independently motivated; they all seem *ad hoc*. Valaris’s view, e.g., raises the question why something should count as knowledge merely because it leads to knowledge, and why it is epistemically permissible to hold very many very specific beliefs about what follows from what on “no independent grounds” whatsoever.<sup>3</sup> In the case of Fumerton’s view, it is not clear how it would help if we can have *a priori* knowledge about the relevant facts unless this knowledge is non-inferential (see Taylor, 2015, p. 2991n12). Leite does not tell us why sometimes a belief is responsibly held merely because it is propositionally justified and is also the manifestation of an ability, while in the case of the conclusions of inferences not even basing the belief on the premises together with this being the manifestation of an ability appears to suffice. And the move to non-doxastic states seems mostly motivated by the hope that the rules governing justification are different ones for such states and we can, thus, avoid the regress.

Now, it is surely sometimes legitimate to hold a philosophical view because otherwise one is stuck between a rock and a hard place. Since this will hardly convince enemies of inferential internalism, however, such a move shifts the burden back to the initial motivation for inferential internalism. The answer to Setiya’s worry seems to be a simple assurance that we can hold the connecting belief rationally without inferring it from other beliefs and without basing it on other beliefs (given that inferential internalism applies not only to inferred beliefs but also to beliefs held on the basis of other beliefs).

At this point, opponents of inferential internalism will probably point out that even if we can avoid the regress of justification just explained, there is still another regress lurking in the background. For even if we accept that we can hold the connecting belief without inferring it from further beliefs, there is still the question what role the connecting belief is playing in the inference. Some opponents of inferential internalism have argued that the only plausible role—other than that of a further premise—is that of a rule. The idea is that the connecting belief or, more generally, ‘acceptance-state’ must serve as a rule that we apply to the premises and thereby arrive at the conclusion (Boghossian, 2008). Suppose the rule is something like this:

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<sup>3</sup> It will become clear in the next section that Valaris is getting at something important here. But his claim that the ‘taking’ involved in inference is a belief prevents him from seeing it clearly. My view is broadly similar to Valaris’s but I show why this is the right response.

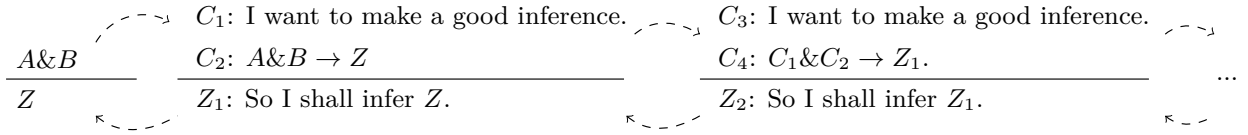


Figure 5: Regress of applications

RULE One can infer  $Z$  from  $A \mathcal{E} B$ .

When we apply this rule to the premise  $A \mathcal{E} B$ , we thereby infer  $Z$ . But how do we do that? It can seem that we must reason in something like the following way:

- (i) I am given the premise  $A \mathcal{E} B$  (and I want to make a good inference).
- (ii) The RULE allows me to infer  $Z$  from the given premises.
- (iii) So I shall infer  $Z$ .

The transition from (i) and (ii) to (iii), however, is another inference. To be sure, it is a practical inference, but an inference nonetheless. Hence, an analog of inferential internalism should apply to it. In order to be justified in arriving at (iii), the reasoner must use a rule of reasoning that allows her to infer (iii) from (i) and (ii). Applying this rule, however, will require making another inference.<sup>4</sup> Thus, we are again launched on a vicious regress. As Boghossian says, if on the internalist view “rule-following always requires inference; and if inference is itself always a form of rule-following, then [... the view ...] would look to be hopeless” (Boghossian, 2008, p. 492).

In order to give all the practical inferences in which a rule of inference is applied the same form, we can formulate them as two-premise practical inferences with the major premise that I want to make a good inference and the minor premise that such-and-such is a good inference (which I will symbolize using an arrow in order to make the connection with the earlier regresses obvious). Figure 5 illustrates the situation.

<sup>4</sup> It is sometimes thought that the problem depends on the assumption that rules are general statements (Boghossian, 2008, 2003; Miller, 2015). That, however, seems to be a confusion of the regress of justifications and the regress of rule-applications. In my example, the rule need not be a general statement.



Again various solutions have been suggested in the literature. Boghossian’s (2014) own solution is that rule-following is primitive and cannot be analyzed. Alexander Miller (2015) has argued that this problem of rule-applications can be solved by following Wittgenstein in saying that following a rule doesn’t require an interpretation. He thinks that the intentional state that is the acceptance of the rule must simply cause acts of rule-compliance ‘in the right way.’ When “I’m asked for a justification or reason for why I applied [... the rule ...] in the way that I did in that situation I can tell no such story: all I can say is *This is how it strikes me*” (Miller, 2015, p. 17). And Hannah Ginsborg (2011) thinks that the right reaction is to replace the connecting belief with a *sui generis* intentional attitude that is an awareness of what Ginsborg calls “primitive normativity.” To apply a rule is simply to manifest the right disposition while having an awareness of primitive normativity. And this awareness can be justified in a way that “does not depend on its conforming to one rule rather than any other” (Ginsborg, 2011, p. 251).

Unfortunately, none of these views gives us a very illuminating account of what role the connecting belief—or ‘taking’ or awareness of primitive normativity—is playing in the act of inferring. The general strategy of all responses is to deny that the use of the connecting belief or rule requires the thinker to make an inference. But the responses don’t go very far beyond such a denial.

#### 5.1.4 Four Emerging Criteria of Adequacy

What can we make of this bewildering complexity of ideas, attacks, and proposed solutions surrounding inferential internalism? These debates can teach us something about the general shape a theory of inferential justification must take. Put bluntly, an account of inferential justification should do justice to the motivations behind inferential internalism without succumbing to any of the three regresses described above.

I have argued in previous chapters that if someone makes an inference, she ‘takes’ her inference to be good. This brings my view within the target-range of the regress arguments just rehearsed. So in the context of the Force Account, we can sharpen my blunt statement at the end of the previous paragraph. We can formulate the following criteria of adequacy

for accounts of inferential justification, given that inferring involves ‘taking’ one’s inference to be good:

- Crit-1     An account of inferential justification should explain why the ‘takings’ involved in inference don’t play the role of premises—thus avoiding the original tortoise regress.
- Crit-2     An account of inferential justification should tell us whether these ‘takings’ must be justified and, if so, how they can be justified in a non-inferential way, i.e. in a way that doesn’t require more of these ‘takings’—thus avoiding the regress of justification.
- Crit-3     An account of inferential justification should tell us how these ‘takings’ can play their role in inferences without this requiring further inferences—thus avoiding the regress of applications.
- Crit-4     An account of inferential justification must explain (a) what, if anything, is wrong with not being able to give reasons to think that one’s inferences are good and (b) what is wrong with bootstrapping our way to a belief about the conditional reliability of inferences of some particular form.

In the remainder of this chapter, I shall argue that the Force Account gives us the resources to construct a view that meets all these criteria of adequacy.

## 5.2 APPLYING THE FORCE ACCOUNT

In the previous section, we have seen the principal advantages and problems of inferential internalism. In this section, I will bring the Force Account of inference to bear on these issues. This will not only teach us something about the justification of inferential beliefs, it will also be a good opportunity to further spell out the Force Account.

I will argue that the Force Account allows us to construct an account of inferential justification that meets all of the four criteria of adequacy developed in Section 5.1.4. The key insight of the Force Account that enables us to do this is that the ‘taking’ involved in

inference belongs to the form of inference. This immediately implies that the ‘taking’ is not another premise (Subsection 5.2.1). It also means that the justification of the ‘taking’ collapses into the rationality of the inference as a whole (Subsection 5.2.2). Realizing this allows us to reverse the order of explanation. We can explain the justification of the ‘taking’ in terms of the rationality of the inference as a whole (Subsection 5.2.3). Moreover, inference does not require that we apply the ‘taking’ by making another inference (Subsection 5.2.4). After all, the relation between an act and its form is not mediated by an inference. Finally, the Force Account offers all these advantages while still doing justice to the original motivations behind inferential internalism (Subsection 5.2.5).

The Force Account delivers all these goods because it recognizes that ‘taking’ one’s inference to be good is not another act or attitude over and above the inference itself, of which it is a formal feature.

### 5.2.1 The Force Account and the Tortoise Regress

According to the Force Account, you cannot make an inference without ‘taking’ the inference to be good. This ‘taking,’ however, is neither a belief nor an intuition. Rather, we make an inference by attaching a particular kind of inferential force to a particular argument in the context of attitudes whose rigidity determine which attitude one must have toward a particular content that occurs in the argument. The particular kind of inferential force gives one’s inference a particular form (in a broadly Aristotelian sense); it makes it an inference of a particular kind, to which a particular set of norms applies. Ascribing a ‘taking-one’s-inference-to-be-good’ is merely to bring out the aspect of inference that is the attaching of inferential force.

Moreover, we have seen that these ‘takings’ cannot be acquired in the way we typically acquire beliefs or judgments. They cannot be the result of accepting testimony, of making an inference, or of learning something (in any straightforward way) by observation (see Chapter 3).

The Force Account, thus, tells us what role the ‘taking-one’s-inference-to-be-good’ is playing in the inference itself. In particular, it follows from the Force Account that the

‘taking’ does not play the role of a premise. Rather, it plays a role that is analogous to the role that ‘taking-one’s-judgment-to-be-true’ plays in judgment. It constitutes and informs the inference in virtue of the thinker reflectively endorsing the inference as living up to the norms that (thereby) govern it. Hence, the Force Account meets criterion Crit-1.

Notice that the Force Account need not be adjusted in an *ad hoc* way in order to meet Crit-1. We have arrived at the view that ‘takings’ are neither beliefs nor intuitions on the basis of independent reasons, namely considerations about testimony and the Inferential Moorean Phenomenon. The idea that ‘takings’ are an aspect of a force was not motivated by considerations deriving from Lewis Carroll’s regress. Moreover, the idea proved useful in thinking about how we arrive at particular attitudes by making inferences and in what sense inference is an active and self-conscious act. So unlike other views, the Force Account provides an independently motivated response to Lewis Carroll’s regress.

What should we say about the case of the tortoise, once we have accepted the Force Account? The tortoise is a character who attaches doxastic force to both of her premises,  $A$  and  $B$ , and does so with high rigidity. We can also assume that she does not have any attitude with low assent rank and high rigidity toward the conclusion.<sup>5</sup> However, the tortoise does not attach inferential force to the argument  $\langle \{A, B\}, Z \rangle$ . She challenges Achilles to force her to do that. In response, Achilles asks her to form the belief that if  $A$  and  $B$  are true, then  $Z$  must be true, and the tortoise does that (if we take writing it down in her notebook as a metaphor for coming to believe it). No matter how many beliefs the tortoise forms, however, nothing of this sort will ever amount to the act of attaching inferential force to the argument  $\langle \{A, B\}, Z \rangle$ .<sup>6</sup> The tortoise tricks Achilles into the regress by making what belongs to inferential force appear as another premise.<sup>7</sup>

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<sup>5</sup> If she did, the problem would be to get her to reject (or suspend judgment on or doubt) one of her premises.

<sup>6</sup> The reason why Achilles’s initial response seems to make sense is that if someone fails to ‘see’ how the premises and the conclusion of an argument hang together and, hence, does not attach inferential force to the argument, we can often begin by getting the other person to accept a further premise (typically a conditional) and then present an argument with different contents where the connection between the contents is easier to ‘see.’

<sup>7</sup> Once we see the structure of the case clearly, we can realize a non-accidental similarity to Frege’s argument against the definability of truth (Frege, 1967, p. 344). Frege says that “in a definition certain characteristics would have to be specified. And in application to any particular case the question would always arise whether it were true that the characteristics were present. So we should be going round in a circle” (Frege and Beaney, 1997, p. 327). If we think of “is true” as trying to capture an aspect of doxastic

So the Force Account gives us an independently motivated account of what role ‘takings’ are playing in inferences, on which the ‘taking’ is not a premise. The ‘taking’ is giving the act its form; it’s an act of attaching inferential force.

### 5.2.2 The Collapse of Justification for ‘Takings’

Let’s move on to Crit-2, which states that accounts of inferential justification ought to tell us whether the ‘takings’ involved in inference must be justified and, if so, how they can be justified in a non-inferential way. The core insight here is that the justification of ‘takings’ collapses into the rationality of the acts they constitute. This is a general fact of all kinds of force. After all, attaching a particular force is not a separate act or attitude, whose justification would need to be secured in an independent way. The whole idea of ‘takings’ being justified must be explained in terms of the rationality of the acts they constitute. Applying this insight to the case of inference shows how the Force Account meets Crit-2.

It is again helpful to start with the case of doxastic force. This time, however, we should focus on the norm of justification rather than the truth-norm for beliefs and judgments; otherwise the point I am going to make will be obscured by the meaning of “true.” Let’s assume for the sake of simplicity that beliefs *qua* beliefs ought to be justified (thus ignoring potential issues concerning foundational beliefs and the like). Moreover, assume that a belief is rational just in case it is doxastically justified. If we apply the general template of the force account to belief, we arrive at the view that to believe that *P* is a ‘static act’ of attaching doxastic force to a judgable content. We can describe this ‘static act’ as the subject ‘taking’ her belief to live up to the norms that govern beliefs *qua* beliefs. Hence, the subject is ‘taking’ her belief to be justified.

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force, what Frege says makes a lot of sense. Even if we knew a characteristic of all and only true thoughts, we couldn’t arrive at ‘taking’ something to be true by merely grasping contents. Just as the tortoise cannot arrive at ‘taking’ the inference to be good by merely believing something. The only disanalogy is that there is nothing that stands to judging as believing a premise stands to inferring. Otherwise the structure is the same: the mistake is to think that force is a matter of relating to the content that the act at issue lives up to the norms that govern it—either by merely grasping it or by believing it. This parallel shouldn’t be surprising, given Frege’s remarks about how the “word ‘true’ seems to make the impossible possible: it allows what corresponds to the assertoric force to assume the form of a contribution to the thought” (Frege, 1979, p. 252).

According to a generalized Force Account, ‘taking’ one’s belief that  $P$  to live up to the norms governing beliefs *qua* beliefs—which includes the norm that beliefs must be justified—is nothing other than to believe that  $P$ . Describing this belief as a ‘taking’ is merely to bring out, and to stress, the reflective aspect of attaching doxastic force. If the belief and the ‘taking’ are the same ‘static act,’ however, they must either both be justified or both be unjustified. In fact, the idea of the ‘taking’ being justified just is the idea of the belief being justified. Otherwise, we would have to say that it can happen that a belief as a whole is justified but part of its form is not justified. In other words, we would have to say that someone can be justified in believing that  $P$  while it not being justified that her attitude is of the kind: belief. But being justified in believing that  $P$  just is being justified in having an attitude of the nature of belief toward the content that  $P$ . So the account I have given implies the following principle of justified ‘taking.’

B-JT       $S$  is justified in ‘taking’ her belief that  $P$  to be justified (and to live up to the other norms governing belief) just in case  $S$  is doxastically justified in holding her thereby constituted belief that  $P$ .

This is merely an instance of a more general principle that falls out of applying the force account to acts and attitudes that are essentially governed by norms and constituted by a reflective endorsement.

G-JT       $S$  is justified in ‘taking’ her act or attitude  $A$  toward  $C$  to live up to the norms that govern it insofar as it is an  $A$  just in case  $S$  is rational in her thereby constituted act or attitude  $A$  toward  $C$ .

The reason why this principle holds is the same as before: Assume for *reductio* that G-JT fails. Suppose first, that  $S$ ’s act or attitude  $A$  toward  $C$  can be rational without  $S$ ’s ‘taking’ being justified. This means that  $S$ ’s act or attitude of kind  $A$  is not of the right kind; it doesn’t have the form an act or attitude of  $S$  toward  $C$  ought to have, rationally speaking. After all, the ‘taking’ is determining the kind or form of the act; it makes it an act or attitude of kind  $A$ . But  $S$ ’s act or attitude  $A$  toward  $C$  is rational. So  $S$  is rationally permitted to hold  $A$  toward  $C$ . This is absurd. Hence, the right-to-left direction of G-JT holds. For the other direction, suppose that  $S$  is justified in ‘taking’ her act or attitude  $A$  toward  $C$  to live

up to the norms that govern it insofar as it is an  $A$ . This means that  $S$  has an attitude of the right kind toward  $C$ . So  $S$  is rationally permitted to hold  $A$  toward  $C$ . But we assumed that  $S$  is not rational in holding  $A$  toward  $C$ . That is absurd. So the left-to-right direction of G-JT holds. Therefore, G-JT holds.

In general, the question whether a ‘taking’—in the sense in which this characterizes a force—is justified collapses into the question whether the thereby constituted act or attitude is rational. I pick up the question what “rational” means for the case of inference in the next subsection. For now, we should realize that it is not surprising that the rationality of the ‘taking’ collapses into the rationality of the thereby constituted act or attitude. After all, the ‘taking’ is not an additional attitude; it is merely the ‘force-aspect’ of the constituted act or attitude.

No doubt, some philosophers will get nervous at this point. After all, I am saying that someone is justified in ‘taking’ her belief to be justified if her belief is justified. This looks suspiciously like an analog of the infamous KK-principle for justification, which is sometimes called the JJ-principle:

JJ        If  $S$  is justified in believing that  $P$ , then  $S$  is justified in believing that she is justified in believing that  $P$ .

Such a principle is highly contentious and generally regarded as anything but obviously true (Alston, 1980; Goldman, 2012, pp. 73–74). Fortunately, no such principle follows from what I have said.<sup>8</sup> What I have said would only imply the JJ-principle if the following held.

TBB        If  $S$  is justified in ‘taking’ her belief that  $P$  to be justified, then  $S$  is justified in believing that her belief that  $P$  is justified.

Given the view just presented, however, any arguments for rejecting the JJ-principle can be turned into reasons for rejecting TBB. The Force Account doesn’t prevent us from accepting

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<sup>8</sup> Sebastian Rödl is getting at a similar idea, I think, when he claims that to say that knowledge is self-conscious is “not simply [to] say that knowing something entails knowing that one knows it. A calculus of epistemic logic that licenses inferences exemplifying the schema ‘ $Kp \supset KKp$ ’ is incapable of representing our claim. It suggests that ‘ $Kp$ ’ is known in the same manner as ‘ $p$ ’, as it employs the same letter to signify the nexus one bears to both these propositions. [...] On the other hand, when  $p$  is known spontaneously, the calculus suggests that ‘ $Kp \supset KKp$ ’ has content, while in truth it is of the form ‘ $p \supset p$ ’. [...] The object of spontaneous knowledge is the same reality as the knowledge, wherefore it is a tautology that who knows the former knows the latter” (Rödl, 2007, p. 145). My view is similar in that I claim that the ‘taking’ is a matter of force. Hence, it is a mistake to symbolize it as part of the content.

such arguments. There is all the difference in the world between being justified in believing a particular content and being justified in holding an attitude of a particular kind. The nature of an attitude one holds is not part of its content. With this issue out of the way, we can return to our main topic: inference.

Let us transfer what we learned to the case of inference. According to the Force Account inference is an act of attaching inferential force. So we can apply the idea formulated in G-JT above. We thus arrive at the following principle.

I-JT       $S$  is justified in ‘taking’ her inference to be a good inference of kind  $k$  just in case  
 $S$  is rational in making the thereby constituted inference of kind  $k$ .

Just as in the case of belief, this principle should be understood in a deflationary way. The justification of the ‘taking’ is nothing over and above the rationality of the inference that it constitutes. As we have seen, that is how force—and hence ‘takings’—work across the board.

The *reductio* argument goes through *mutatis mutandis*. Suppose that  $S$  could be rational in making the inference of kind  $k$  without being justified in ‘taking’ her inference to be a good inference of kind  $k$ . This means that  $S$ ’s inference doesn’t have the right form; it rationally ought to be of another kind or not exist at all. But  $S$  is rational in making the inference. So  $S$  is rationally permitted to make the inference. That is absurd. The same reasoning works in the other direction as well. If  $S$  is justified in ‘taking’ her thereby constituted inference to be a good inference of kind  $k$ , then  $S$  is rational in her relation to the argument involved in the inference. But that means that her inference is rational. Therefore, I-JT holds.

The general point is that since ‘takings’ are formal aspects of inferences they merely reflect the kind of the inference in question. Being justified in such a ‘taking’ is nothing other than the act being of a rationally permitted kind. But a rationally permitted inference is a rational inference. There simply is no question of ‘takings’ being justified over and above the question whether the inference is rational.

It is now easy to realize that the Force Account meets criterion Crit-2. The only sense in which ‘takings’—of whatever kind—must be justified is that the acts and attitudes that they constitute must be rational. This requires a further act of attaching inferential force



only if the act or attitude itself is the result of an inference. Inferences, however, cannot be the result of other inferences (see Section 4.5.3 above).<sup>9</sup> So the ‘takings’ involved in inference don’t need to be justified in any way that would require other acts of attaching inferential force, i.e., other ‘takings’ of this kind. The justification of the ‘takings’ involved in inference collapses into the rationality of the inference as a whole.

### 5.2.3 The Rationality of Inferences

I said that the justification of the ‘takings’ involved in inferences consists in nothing over and above the rationality of the inferences themselves. The fundamental error of inferential internalism is to think that we must explain the rationality of inferences in terms of the justifications of the ‘takings’ involved in them. Inferential internalists think that inferences are only rational if there is some justification for ‘taking’ the inference to be good that can be characterized independently and antecedently to characterizing the rationality of inferences. In fact, however, the order of explanation must go the other way around. The idea of ‘takings’ being justified should be explained in terms of the rationality of inference as a whole. That was the result of the previous subsection. This raises the question under what conditions inferences are rational. That is the question I shall address in this subsection.

What we need is an account of the rationality of inference that doesn’t rely on an antecedent justification of the ‘taking’ involved in inferences, and ideally the account should also do justice to the motivations behind inferential internalism. Any account that fits this abstract description can be used to flesh out the Force Account. This leaves room for many different views on the rationality of inferences. Here I shall sketch a concrete proposal in order to show that such accounts exist.

Whatever else inference may be, theoretical inference must be a way in which we can gain knowledge and practical inference must be a possible route to virtuous action. Surely, the inferences that give us knowledge and those that result in virtuous action are rational

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<sup>9</sup> Recall that inference cannot play the role of premise- or conclusion-attitudes in other inferences. For that they would need a content that can be denied, embedded, and the like. The single-step inferences I am discussing throughout can, of course, form chains. In this sense, an inference can be the result of previous inferences: the premises are the conclusions of other inferences. But that is not what we are interested in here. After all, we are assuming all along that the premises are justified.

inferences. So in order to give an account of rational inference, it will be helpful to ask ourselves: What are the kinds of inference that can give us knowledge and lead to virtuous action?

An immediate clarification is in order. For an inference to give us knowledge or lead to virtuous action we must be rational in relation to the premise-attitudes. And for knowledge the premises must also be true. In the theoretical case, we must usually know the premises of an inference that gives us knowledge.<sup>10</sup> In the case of practical inferences, it is a difficult question what among practical attitudes corresponds to knowledge. But it seems plausible that virtuous actions only result from practical inferences the premises of which are held rationally. Now, we are interested in the kind of inference that can give us knowledge or lead to virtuous action if we assume that we are rational in relation to the premise-attitudes. So let's abstract away from the rationality (and correctness) of the premise-attitudes. Given rationally held (and correct) premises, what must the inference itself be like?

At a very abstract level, a rational inference must be one that is a correct and non-defective manifestation of the thinker's inferential abilities. However, it is not obvious how we could pin down this abstract idea. I suggest that, at this point, we take a leaf out of the book of virtue epistemology (Sosa, 2007). Two ideas that are familiar from virtue epistemology are that knowledge requires a belief that is apt and safe.<sup>11</sup> An apt belief is one that is accurate, i.e. true, because it is adroit, i.e. a manifestation of a competence. A "performance is safe if and only if not easily would it then have failed, not easily would it have fallen short of its aim" (Sosa, 2007, p. 25). These ideas can be transferred to the case of inference. The result is the suggestion that an inference is rational just in case the following three conditions are met:

1. The inference is correct.
2. The inference is correct because it is the manifestation of a competence.
3. The inference couldn't easily have been incorrect.

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<sup>10</sup> The unusual cases are, e.g., cases in which the last step of our reasoning involves discharging an assumption.

<sup>11</sup> Sosa actually abandoned the safety requirement in favor of the aptness requirement, but that need not detain us here.

I think that this is basically right. However, we must spell out what these conditions actually mean. So let's unpack these three conditions.

Regarding the first point, I suggest that we call an inference of a particular kind "correct" just in case the "reason for" relation that underwrites good inferences of this kind holds between the premises and the conclusion of the argument to which force is attached in the inference, and the assent-ranks and rigidity of the involved attitudes are appropriate for the inference. The "reason for" relations at issue are the kind of relation I have discussed in Section 4.3.1 above, i.e. the kind of relations that prohibit or permit certain patterns of attitudes.

Let's turn to the second point. An inferential competence is an ability to make inferences that are correct. This involves a disposition to make inferences that are correct. Such dispositions vary in their generality and in their stability. It is plausible that in order to count as an ability they must have a certain degree of stability; the thinker must tend to make the same correct inference when put in the same circumstances again. Regarding the issue of generality, it seems implausible that there can be inferential abilities that concern only the inference from one particular set of premises to one particular conclusion. The reason for this seems to be that someone with such a limited ability can probably not count as grasping the concepts involved in the inference. That, however, isn't a matter of the rationality of the inference; it's a matter of being able to make the inference in the first place. You cannot make an inference of which you cannot grasp one of the premises or the conclusion. So the inferential abilities we are talking about must probably be general to some degree in order to exist at all. Must they also have a further degree of generality in order to be rational? I see no reason to think that this is so.

However, I think there is more involved in an inferential ability than merely a disposition to make certain inferences. The thinker must also be (intellectually, not necessarily physically) able to engage with at least basic forms of criticism of her inference. This requires recognizing at least some kinds of criticism for what they are, being able to wonder whether one has made a mistake, and being able to recognize similarities between inferences. At least in us humans, inferential abilities and abilities for engaging in rational discourse are not separable.

Putting these points together, we arrive at the view that an inference being correct because it is competent means that the inference is correct because it is the manifestation of an inferential ability, which implies a certain stability, generality, and ability to engage with criticism. The “because” in the formulation of the second point excludes, e.g., cases in which the thinker manifests her ability in a defective way but gets lucky and nevertheless makes an inference that is underwritten by the right “reason for” relation.

Regarding the third point, I think that one direction in which we can spell this out is in terms of the acquisition of the inferential ability. If the thinker acquired her inferential ability, e.g., by being indoctrinated into a bizarre world-view or into an ‘occult science,’ it could easily have happened that the inferential disposition she acquired is not a disposition to make correct inferences. It seems right to say that inferences that are manifestations of abilities that were acquired in this way are not rational. Another case in which a manifestation of an inferential ability could easily have been incorrect is one in which the thinker is under the influence of some drug, technical device, or emotion that could easily have impaired her inferential ability even though it did not actually do so. It again seems right to exclude such inferences from the rational ones. And from these examples we can extrapolate to new cases.

To sum up, I suggest that an inference is rational just in case the inference is correct because it is the manifestation of an inferential ability and it could not easily have been incorrect. We have seen that this implies that the ability was acquired in the right way, that the thinker is able to engage with some basic criticism, and that she has an inferential disposition with a suitable degree of generality and stability. Given the results from the previous subsection, it follows that a reasoner is justified in ‘taking’ her inference to be good just in case the conditions just mentioned hold.

An opponent might object that the conditions just spelled out are broadly externalist in nature. Especially the third condition is not something whose obtaining is always accessible from the perspective of the thinker. I don’t think there is anything wrong with that. For, first, I will argue below that these conditions can do justice to the motivations behind inferential internalism. Second, we need externalist criteria for the rationality of inferences anyway. The criterion that the inference must be correct is already broadly externalist in nature. An internalist like Fumerton might deny this because he thinks that we can know *a*

*priori* which inferences are good. The question whether we can know these things *a priori*, however, is neither here nor there. To see this, consider the following example:

Someone who hasn't heard anything about Cantor and the peculiar properties of infinite sets reasons as follows: "For every even natural number, I can find two natural numbers without ever repeating any number (we can map 2 to the pair of 1 and 2, map 4 to the pair of 3 and 4, and so on). Therefore, there must be twice as many natural numbers as there are even natural numbers." It seems unreasonable to expect of anyone who hasn't received any kind of training with respect to infinite sets to realize that such an inference would only work if the set of all natural numbers were finite. In fact, given the reasoner's epistemic situation, the most reasonable thing for her to believe about the ratio of even to natural numbers seems to be that it is  $\frac{1}{2}$ . If that is right, however, how could we deny that the inference is rational?

This leads to a dilemma for any version of inferential internalism that tries to get by without any broadly externalist conditions, which we might call "super-internalism." If our super-internalist says that the inference is rational, we can ask how it is possible to acquire inferential knowledge given that even rational inferences from known premises don't always yield knowledge. How can I ever be justified in believing the conclusion of a rational inference from known premises if I am not justified in holding that this is not one of the cases where such an inference doesn't yield knowledge? And it is hard to see how I could rule out that I am subject to an "inferential illusion" like the one about the natural numbers. After all, checking my inferences requires making further inferences.

If our super-internalist says that the inference is not rational, however, she has to admit that we, as reasoners, cannot always distinguish rational from non-rational inferences. They can be subjectively indistinguishable. But this again flies in the face of super-internalism. After all, it now seems that whether our inferences are rational is a matter of 'rational luck'—of something that is not under our control.

Either way the super-internalist cannot get what she ultimately wants: a realm in which whether or not something is rational can be determined entirely from the perspective of the thinker, without having to rely on any luck or favors that the world might do her. We must reject this idea as a chimera. As John McDowell puts it, we must reject the "fantasy

of a sphere within which reason is in full autonomous control” (McDowell, 1995, p. 888). We cannot eliminate “the kindness of the world, as a contributor to our coming to occupy epistemically satisfactory positions in the space of reasons” (McDowell, 1995, p. 886). For the case of inference, this means that we must allow that some broadly externalist conditions must hold in order for an inference to be rational.

This doesn’t mean that we must thwart the internalist’s hope that the proper functioning of our inferential capacities guarantees that our inferences are rational. For there is still the disjunctivist option of denying that there is a highest common factor that is shared between rational inferences and non-rational inferences. The disjunctivist will say that in the case of rational inference, the rationality of the inference is guaranteed by the fact that we properly exercise our inferential abilities. Moreover, we can know that this is so. However, we cannot distinguish the case in which we exercise our inferential abilities properly—and know that we do—from the case in which we don’t. Since the capacity of making rational inferences and the capacity to know that one is making a rational inference are identical, this just means that this capacity is fallible; it always fails in both aspects together, as it were. In any event, the proper exercise of our inferential abilities guarantees that our inferences are rational, on this view. If the internalist requires more than this, she will fall into the dilemma just described.

This is analogous to disjunctivism in the case of perception. The disjunctivist can say that properly exercising our perceptual capacities guarantees knowledge; it gives us a “conclusive warrant” (McDowell, 2013, p. 147). And this warrant “is an act of the knower’s rationality” (McDowell, 2013, p. 150). A case of illusion is not a case in which we properly exercise our perceptual capacities. The disjunctivist admits that the case in which we properly exercise our perceptual capacities and the case in which we don’t are subjectively indistinguishable. That does not mean, however, that we don’t know that we are exercising the capacity properly when we do. For the “capacity by which one knows the epistemic significance of one’s experiences is not another capacity, but just the capacity whose fallibility we anyway have to take in stride” (McDowell, 2013, p. 151).

To sum up, I have suggested that an inference is rational just in case it is correct because it is a manifestation of an inferential ability, and it couldn’t easily have been incorrect. These

conditions are broadly externalist in spirit. However, this is not a problem. We need such broadly externalist conditions for the rationality of inferences in any case. I will argue below that these conditions suffice to capture the motivations behind inferential internalism. The upshot of all this is that we can explain when an inference is rational without drawing on the idea of the ‘taking’ involved in the inference being justified. This means that we can explain what it means for such a ‘taking’ to be justified in terms of the rationality of inference as a whole.

#### 5.2.4 How Not to Apply ‘Takings’

Before turning to the motivations behind inferential internalism, let us look at Crit-3, which states that accounts of inferential justification must tell us how the ‘takings’ involved in inference can play their role without this requiring further inferences, so that we can avoid the regress of applications.

It is easy to see that the Force Account meets this criterion of adequacy. After all, we don’t need to go through any reasoning to apply any kind of force—except insofar as we go through some reasoning to arrive at the thereby constituted act. Just as we don’t reason from “I want to judge only what is true, and it is true that  $P$ ” to “So I shall judge that  $P$ ,” so we don’t reason from the acceptance of an inference as good to the inference. This must be so, given the idea of force as the form of the act. The ‘taking’ involved in inference is merely an aspect of the form of the inference. But the form of the act is not there independently or antecedently to the act itself. There is no such thing as a step one could take from the form of the act to the act itself. That is to say, there is no such thing as a step one could take from the act of applying inferential force to the inference itself. So the regress of applications is no threat to the Force Account.

That being said, there is an issue that is often brought up at this point, and some comments on it are in order. The issue is how the generality of an inferential ability and the particularity of its application in an individual inference are related. In particular, it seems to many that the ‘taking’ involved in a particular inference must be inferred from a more general belief or acceptance-state ([Setiya, 2013](#); [Boghossian, 2003](#)).

Crispin Wright, e.g., thinks that there is a dilemma here. If the ‘taking’ has a general content, we cannot avoid some regress of applications because the reasoner must somehow get from the general ‘taking’ to something specific enough to play a role in her particular inference. But if the content of the ‘taking’ is specific enough to immediately play its role in a particular inference, it must be arrived at via a bit of reasoning.

If, on the other hand, the registration state [i.e. what I call ‘taking,’ UH] is conceived as carrying a content *specific to the inferential transition* that it controls, the question we need to focus on is: how does the system get into the registration state in the first place? Our inferential capabilities are [...] open-ended in the way in which our linguistic competences are open-ended: to have a specific capacity of inference is to be able to handle—make, and ratify—no end of inferences of the appropriate kind. If each of these performances requires the control of an appropriate specific registration state to count as inference, then we seem forced [...] to conceive of these specific states as accessed by inference from general information states that encode our overall inferential program. (Wright, 2014, p. 32)

We have already seen in Section 3.3 that—for independent reasons—the ‘takings’ involved in inference cannot be the result of further inferences (just as they cannot be the result of accepting testimony). ‘Takings’ give inferences their form; they don’t occur outside of, or antecedently to, the inferences they inform (see Section 4.5.3). So the Force Account isn’t under any immediate threat from what Wright says. But noticing this doesn’t answer the question how the generality of our inferential abilities relates to the particularity of individual inferences.

We must realize, at this point, that exercising a general ability in a particular case cannot always require first deriving a specific “information state” from a more general “information state,” on pain of a vicious regress.<sup>12</sup> After all, the ability to engage in such derivations is itself a general ability. Sometimes we can directly bring our general abilities to bear on a particular case. Exercising our inferential abilities is of this kind.

This is compatible with the idea that psychologists or neuroscientists may explain how we make a particular inference by appealing to some mental or physiological state that is also involved in other inferences of the same general kind. After all, the transitions between

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<sup>12</sup> Kant, in effect, already taught us that much in the first *Critique* when he pointed out that we must recognize the power of judgment as a faculty in its own right that is not just an application of the faculty of understanding (Kant, KrV B172).



such states are not inferences—just as the transitions involved in the processing of visual information are not inferences.<sup>13</sup>

### 5.2.5 Recapturing the Motivations Behind Inferential Internalism

Let's return to the motivations behind inferential internalism by asking whether the Force Account meets Crit-4 above. This criterion requires that accounts of inferential justification must explain (a) what, if anything, is wrong with not being able to give reasons to think that one's inferences are good and (b) what is wrong with bootstrapping our way to a belief about the conditional reliability of inferences of some particular form.

The first of these points can be handled very quickly. If someone is not able to give reasons to think that her inferences are good, this is a problem because, and to the extent that, the agent does not meet the criteria for the rationality of her inferences. In particular, the agent does not meet the criterion that she must be able to respond to (at least basic) criticism of her inference (see Section 5.2.3). Notice that our ability to justify our inferences is typically very limited. It is often already an adequate response to criticism to contrapose and ask: "But don't you see that you cannot hold on to this premise if you reject the conclusion?" And often it suffices to be able to give examples of inferences that are clearly good and (apparently) have the same structure. So the bar isn't very high, and this is how it should be.

Dealing with the bootstrapping worry requires a bit more work. Why can't we learn by induction (without any independent checks) that induction is a conditionally reliable type of inference?<sup>14</sup> The problematic step in such a bootstrapping induction is the step from "*P*, and I arrived at this belief by induction" to "So, induction got it right in this case." This kind of inference is problematic in general, i.e. inferences of the following shape are not good inferences:

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<sup>13</sup> There is no basis for thinking of such transitions as inferences. Some of these transitions are highly complex, and it seems utterly implausible that we should have the inferential abilities that such transitions would require. They cannot be ascribed to the whole animal. They don't degrade under cognitive load. They cannot be performed consciously. They are ubiquitous in our brains, so that saying that these are inferences will yield a much too liberal notion of inference. They cannot give us knowledge of the conclusion.

<sup>14</sup> The inference would be analogous to the bootstrapping on MP set out in Section 5.1.1.

1.  $P$ , and I have arrived at the belief that  $P$  via belief-forming method  $M$ .
2. Therefore, belief-forming method  $M$  produced a true belief in this case.

Notice that we don't need full-blown inferential internalism to rule out such inferences as problematic. In the context of the Force Account, it suffices to claim, firstly, that a theoretical inference to a belief isn't good if the conclusion isn't true and, secondly, that the following principle holds.

CanS      You cannot arrive at a justified belief that  $Q$  in a way that involves belief-forming method  $M$  if you cannot rationally suspend judgment on whether  $Q$  until you have formed the belief that  $Q$  in the way that involves method  $M$ .

After all, we know from the discussion of the Inferential Moorean Phenomenon that you cannot rationally suspend judgment on whether your inference is good while making the inference. That is part of what it means that you must 'take' your inference to be good. But if your inference isn't good unless it produces a true belief in the conclusion, then you cannot rationally suspend judgment on whether your inference yields a true belief without also being in a position to rationally suspend judgment on whether your inference is good. Hence, you cannot rationally suspend judgment on whether your inference is good while making the inference to  $P$ —and then going on to infer that your inference produced a true belief in the case at hand (which is the  $Q$  in CanS). That means that you cannot rationally suspend judgment on whether your inference produced a true belief in the case at hand until you have formed the belief that it did produce a true belief—via first making the inference and then inferring that your inference produced a true belief. By CanS, it follows that you cannot arrive at a justified belief that your inference produced a true belief.<sup>15</sup>

So we can rule out bootstrapping without having to rely on inferential internalism. Both of the ideas we used to derive this result seem compelling. There is surely something wrong with an outright theoretical inference to a false belief. After all, we can run the whole story about Inferential Moorean Absurdities with thoughts of the following shape: " $P$ ; therefore,  $Q$ . But this inference doesn't yield a true conclusion in this case." And the principle CanS

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<sup>15</sup> Of course, if you are asked whether your inference produced a true belief in the case at hand, you must say that it did—or else stop holding the belief. But if you arrived at this answer via an inference like the one above, something went wrong.

also seems correct. After all, you cannot establish that things are thus and so if you cannot first temporarily suspend judgment on the matter and then satisfy yourself that things are indeed thus and so.

A defender of full-blown inferential internalism might object that we need inferential internalism to explain why CanS is true. That, however, is false. We can explain the truth of CanS by appealing to the nature of inquiry and belief-forming methods. Even if Peirce (1877, sec. IV) is wrong in holding that “the settlement of opinion is the sole end of inquiry,” something in the neighborhood seems right. For a belief-forming method to yield a justified belief, it should be possible to settle an inquiry into the subject matter by arriving at the belief in this way. But in order to engage in an inquiry into whether  $P$ , we must first suspend judgment on whether  $P$ . If we cannot rationally do that, the inquiry—conducted in this particular way—seems bogus. Thus, the function of belief-forming methods explains why CanS is true; we don’t need full-blown inferential internalism for that.

To sum up, the Force Account can do justice to the two main motivations behind inferential internalism. The conditions for the rationality of inferences explain what is wrong with thinkers who cannot defend their own inferences. And the idea that inference involves ‘taking’ one’s inference to be good—in combination with a plausible collateral premise—explains what is wrong with bootstrapping.

### 5.3 TAKING STOCK

In this chapter, I have shown that the Force Account can be applied fruitfully to debates in epistemology. Once we accept the Force Account, it becomes obvious what the root of all the problems of inferential internalism is, namely the failure to realize that ‘taking’ one’s inference to be good belongs to the form of the inference. This failure leads inferential internalist to think that the ‘taking’ in question is a belief that must be justified independently of the inference itself. The Force Account agrees with inferential internalism that in order to arrive at a justified belief via inference, we must be justified in ‘taking’ our inference to be good. According to the Force Account, however, this justification for ‘taking’ one’s inference to be

good collapses into the rationality of the act of inferring itself. We must reverse the order of explanation. The ‘taking’ is justified if and because the inference as a whole is rational. I have suggested that an inference is rational just in case it is correct because it is the manifestation of an inferential ability and it couldn’t easily have been incorrect. An inference is correct, if the appropriate “reason for” relation holds and is applied appropriately relative to the assent-ranks and rigidity of the involved attitudes. In order to have an inferential ability, the thinker must be able to engage with criticism. And the requirement that the inference couldn’t easily have been incorrect rules out that inferences that are the result of indoctrination count as rational. The result is a picture on which you must be justified in ‘taking’ your inference to be good in order to be justified in believing the conclusion, but this just means that your inference must be rational.

The account of the rationality of inference that I have suggested can be replaced with any alternative account that does not draw on an already understood notion of the justification of the ‘taking.’ Hence, the view can be developed in many different ways. The crucial point is not how exactly this is done; the crucial point is that ‘takings’ belong to the form of inferences. This implies that they cannot be premises, and so Lewis Carroll’s original regress does not arise. It implies that their justification collapses into the rationality of the inference as a whole, and so no regress of justifications can arise. And it implies that there is no step of application that would need to be taken in order to get from the ‘taking’ to the inference, and so no regress of applications can arise. In other words, the Force Account immediately solves all three regresses at once, simply by letting us realize that ‘takings’ are formal aspects of inferences.

The Force Account allows us to get around the well-known problems of inferential internalism while doing justice to the motivations behind it. In particular, the Force Account explains what is wrong with thinkers who cannot defend the goodness of their own inferences and it blocks bootstrapping our way to beliefs about the reliability of any kind of inference. It does all of this while being independently motivated and without making *ad hoc* moves to get around the standard problems of inferential internalism.

## 6.0 SECOND APPLICATION: MORAL TESTIMONY

We have seen in the previous chapter that the Force Account can be fruitfully applied in debates about theoretical inference. However, the account aspires to also apply to practical inference, i.e. the kind of inference by which we can arrive at intentional action or intention. Can the Force Account help us to solve problems in the practical domain? In this chapter, I shall argue that the Force Account enables us to resolve debates about what, if anything, is wrong with acting on moral beliefs we accept merely on the say-so of others. Why can it be problematic to act on a moral belief that we take to be true without understanding why it is true?

I shall argue that there is indeed something wrong with acting on moral beliefs one holds solely on the basis of testimony. This is because being a competent moral agent is, in important respects, more like being a good mathematician than like being a good historian.<sup>1</sup> Being virtuous is a matter of reasoning well in the practical domain and not a matter of knowing moral truths. The virtuous agent makes the right practical inferences. The ability to make the right practical inferences, however, cannot be shared via testimony. This explains why we typically cannot act virtuously by acting on the basis of moral beliefs we acquired by testimony.

What I just said puts me on the side of what has come to be known as “pessimism” about pure moral testimony—as opposed to optimism. I call my view “Inferential Pessimism.” This view differs from traditional pessimism in that (i) it allows that some cases of pure moral testimony are not problematic and (ii) the explanation of what is wrong with many cases

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<sup>1</sup> What I am using here are, of course, cartoonish stereotypes of mathematicians and historians; I hope they nevertheless help to get my point across.

of pure moral testimony draws on general facts about inference and not on anything that is special to the moral sphere.

The chapter is structured as follows: I will begin, in Section 6.1, by outlining the debate about pure moral testimony. I then show how the Force Account can help us to settle this debate by arguing for Inferential Pessimism (Section 6.2). In Section 6.3, I show how Inferential Pessimism explains what is wrong with pure moral testimony (in an important class of cases) and how it can be applied to examples that are frequently discussed in the literature. I end by taking stock in Section 6.4.

## 6.1 THE DEBATE ABOUT MORAL TESTIMONY

Plato's dialogue *Meno* famously begins with Meno asking:

I wonder whether you can tell me, Socrates, whether excellence [i.e. virtue] is teachable or, if not teachable, at least a product of habituation. Or perhaps it isn't the kind of thing one can practise or learn, but is a natural human endowment. If not, how *do* people become good? (Plato, *Meno*, 70a)

Meno's question comprises various further questions, e.g., whether there can be moral experts, how character traits can be shaped, and what role education can play in becoming virtuous. One important way of being taught something, however, is to be told that things are thus and so, i.e. to receive testimony. Hence, one aspect of Meno's question is what role testimony can play in our moral lives. Can testimony about moral matters enable us to act virtuously or with moral worth?<sup>2</sup> This question is the topic of much recent debate and of this chapter.

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<sup>2</sup> Most of the literature uses the terminology of "moral worth" instead of a virtue-theoretic vocabulary. I will use the latter kind of terminology. My arguments can, however, be translated into "moral worth" terminology in a straightforward way.

### 6.1.1 Pessimism vs. Optimism About Pure Moral Testimony

The recent philosophical debate regarding moral testimony is structured around two opposing camps. The camp that has come to be known as “pessimists”<sup>3</sup> hold that there is something morally objectionable about acting on the basis of testimony regarding what is right or wrong. The cases pessimists have in mind are cases of adult and healthy humans receiving testimony whose content is purely evaluative—all non-moral information is already shared between the giver and the receiver of the testimony—and does not explain why the evaluation is correct or well supported. Call such a case a case of “pure moral testimony.”<sup>4</sup> Sarah McGrath helpfully contrasts two cases to bring out what kind of situation pessimists have in mind.

- Case A. After carefully reflecting on the question of whether eating meat is immoral, I become convinced that it is.
- Case B. You tell me that eating meat is immoral. Although I believe that, left to my own devices, I would not think this, no matter how long I reflected, I adopt your attitude as my own. It is not that I believe that you are better informed about potentially relevant non-moral facts (e.g., about the conditions under which livestock is kept, or about the typical effects of eliminating meat from one’s diet). On the contrary, I know that I have all of the non-moral information relevant to the issue that you have.

It is natural to think that there is something problematic about my moral opposition to eating meat in Case B, in a way that there is not in Case A. (McGrath, 2009, p. 321)

Everyone agrees that there is something “odd” about Case B.<sup>5</sup> This “oddity” doesn’t seem to derive from anything specific to the particular example. After all, such examples can be multiplied indefinitely. Here is an example from Robert Howell.

Suppose those wizards at Google come out with a new app: Google Morals. No longer will we find ourselves lost in the moral metropolis. When faced with a moral quandary or deep ethical question we can type a query and the answer comes forthwith. Next time I am weighing the value of a tasty steak against the disvalue of animal suffering, I’ll know what to do. Never again will I be paralyzed by the prospect of pushing that fat man onto the trolley tracks to prevent five innocents from being killed. I’ll just Google it. Again I find myself dependent on Google for my beliefs [just as when we use Google Maps to get around], but in this case it seems to many, myself included, that this is not a good way

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<sup>3</sup> The terms “optimism” and “pessimism” with respect to moral testimony were coined by Robert Hopkins (2007).

<sup>4</sup> I take this term from Alison Hills (2013). Sarah McGrath (2009) uses “pure moral deference” for a similar phenomenon.

<sup>5</sup> I take the terms “odd” and “oddity” to refer to the (alleged) relevant feature (of which we want an explanation) from Alison Hills (2013).

to go. There seems to be something wrong with using Google Morals. But what is it? (Howell, 2014, p. 389)

That there is something wrong or “odd” in these cases is puzzling because there doesn’t seem to be anything wrong with relying on testimony about another subject matter in otherwise identical circumstances. I can, for example, easily come to know on the basis of testimony under what conditions livestock is kept. And I can even become a vegetarian on the basis of reflecting on the ethical implications of these conditions, without this seeming problematic in the way McGrath’s Case B seems to be problematic. It thus appears that there is something special about moral issues, something that makes otherwise unproblematic cases of testimony “odd.”

Pessimists disagree among themselves what the correct explanation of the “oddity” is. One sub-camp among the pessimists think that the problem is that we cannot acquire knowledge about moral matters on the basis of testimony. McGrath, e.g., thinks that the problem is that there are no moral facts, and so there is nothing one could come to know (McGrath, 2009, 2011). In contrast to this, a second sub-camp claims that while testimony can give us knowledge about moral matters, it cannot enable us to act with moral worth. A popular explanation of this is that testimony cannot give us moral understanding and that moral understanding is required for morally worthy actions (Hills, 2009, 2013; Nickel, 2001).

Optimists regarding moral testimony disagree with all such claims. They hold instead that pure moral testimony can, at least in principle, give us knowledge and enable us to act with moral worth (Sliwa, 2012; Enoch, 2014; Driver, 2006; Jones, 1999). Since there is obviously something “odd” about the cases pessimists have described, however, optimists have to explain this “oddity” in a way that is consistent with their view. Paulina Sliwa (2012), for example, suggests that in some of these cases what is “odd” is the very fact that the hero of the story is ignorant regarding the moral facts at issue; sometimes what is “odd” is that the question at issue is so controversial that one shouldn’t rely on testimony in deciding it; and sometimes the cases are problematic because they involve a reluctance to make one’s own decisions. What all these explanations have in common is that they apply to non-moral and moral testimony alike. Such explanations, thus, allow optimists to say that testimony about moral matters works just like testimony about non-moral matters.



### 6.1.2 A Bipartisan Task and a View in a Nutshell

Optimists tend to think that the “oddity” derives from different sources in different cases, whereas pessimists seem to assume that the “oddity” must be explained in the same way in all cases. That makes sense if we assume that pessimists must hold that all cases of pure moral testimony are problematic. It brings out, however, that there is room for much more nuanced views in this debate.

Someone may hold, e.g., that while not all cases of pure moral testimony are “odd” or problematic, some are—and that has to do with the nature of morality. At the same time, however, an advocate of such a view may agree that some cases of pure moral testimony are not “odd” and some are “odd” solely because of other factors. So a broadly pessimistic view is compatible with the acknowledgment of more than one source of “oddity.” Once we realize that there are such options, we can see that pessimists and optimists alike must identify where the “oddity” at issue comes from in various examples. So, given the current state of the debate, our task should be a threefold bipartisan project. We should:

- (i) identify genuine sources of “oddity” that are relevant in cases of pure moral testimony (but need not be specific to such cases),
- (ii) explain how the “oddity” derives from these sources, and
- (iii) determine to what extent the results from (i) and (ii) support optimism or pessimism about pure moral testimony.

In the remainder of this chapter, I shall pursue this project by focusing on one particular source of “oddity,” which is arguably at the core of most examples presented by pessimists.

In a nutshell, the “oddity” I want to discuss is this: Moral knowledge is often knowledge about the goodness of practical inferences, i.e. about which practical inferences are pieces of good practical reasoning. However, learning by testimony that something is a good inference does not put one in a position to make the inference. Now, whether an action is virtuous (or morally worthy) typically depends on the practical inference that leads to the action. Hence, if the action one is going to perform is virtuous only if it is the result of a particular practical inference, and one knows about the goodness of this practical inference merely by testimony, then one will not be able to act virtuously by performing the action. After all, one will

not be able to make the practical inference required for acting virtuously by performing the action. Of course, one might be able to act virtuously by doing something else, and maybe one's testimonially acquired knowledge will be helpful in doing so. Nevertheless, in such cases, there is a particular way of acting virtuously that testimony cannot make available.

Notice that this view does not imply that all cases of pure moral testimony are problematic. After all, we may sometimes use what we learn by testimony as a premise in a practical inference. And if the relevant premise that we acquire by testimony is purely moral in its content and the inference we make is good, then pure moral testimony will have enabled us to act virtuously. Notice also that I don't claim that in every "odd" case of pure moral testimony, the "oddity" can be explained in the way just sketched. I do claim, however, that this explanation captures a core motivation behind pessimism.

My account of the "oddity" of pure moral testimony appeals to general facts about inference. The source of the "oddity" lies neither in anything that can only arise in connection with moral contents nor in anything that we find exclusively in practical reasoning. Optimists are right about this. The non-transmissibility of inferential abilities via testimony assumes a particularly important role in the moral domain, however, because the goodness of practical inferences is central to morality.

## 6.2 INFERENCEAL PESSIMISM

In this section, I defend the view I have just sketched. I shall lay out the argument in the first subsection; then I defend its premises in the subsequent two subsections. Before I start, however, a clear statement of my thesis is in order.

As already intimated, Inferential Pessimism is a view about what explains the "oddity" of many cases of pure moral testimony. By saying that such cases are "odd" I mean that the subject's action isn't virtuous (or morally worthy); something has gone wrong, as evaluated from an ethical perspective. I call anything that explains this kind of "oddity" a "source of oddity." Inferential Pessimism (IP) identifies one of these sources of "oddity" as a lack of inferential abilities.

IP Unless other sources of “oddity” are present, pure moral testimony is “odd” just in case, and because, what the agent is lacking is the ability to make the right practical inferences (as opposed to lacking knowledge of a premise).

Let’s unpack this a little bit. The agent is lacking something relative to the case in which nothing is “odd,” i.e., a case in which the agent acts virtuously (to the extent to which her character permits this in the given case).<sup>6</sup> The idea behind IP is that the agent can act virtuously just in case she can make the right practical inference. For this she needs the right attitudes toward the premises and the right inferential ability. Inferential Pessimism is the view that while testimony can help if the agent lacks knowledge of premises, it cannot help if the agent lacks an inferential ability to act virtuously.<sup>7</sup>

Inferential Pessimism is an application of the Force Account. After all, it is an application of the insight that force, including inferential force, cannot be transmitted through testimony. Pure moral testimony is particularly interesting from the perspective of the Force Account of inference because it gives us realistic cases that are analogous to the case of Ramanujan and Hardy discussed in Section 3.2. With an improved understanding of what Inferential Pessimism is, we can now turn to the argument for it.

### 6.2.1 The Argument for Inferential Pessimism

In this subsection, I lay out the argument for Inferential Pessimism. I will ignore the “because” in IP for the purposes of my argument—it will emerge from the argument as a whole that an explanatory relation indeed holds. Since IP is a biconditional, we will need two arguments, one for each direction.

Let’s begin with the left-to-right direction of IP. This direction is almost trivial because if the case is “odd” and no other source of “oddity” is present, the only explanation that is available is that the agent is lacking an inferential ability. It is interesting, however, that we can give an argument with explanatory force that the contrapositive of the claim holds. If we

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<sup>6</sup> I will leave the qualification “modulo her independent character flaws” implicit from now on.

<sup>7</sup> I shall ignore the potential “oddity” of pure moral testimony ‘aiming’ to provide a conative premise—thus classifying this as another potential source of “oddity.” Discussing this issue would require a discussion of motivational internalism, which would lead us too far afield here. In general, I would handle the case in the same way as the lack of an inferential ability.

contrapose, we get: If the agent is not lacking the ability to make the right practical inference (as opposed to lacking knowledge of a premise), then the case of pure moral testimony is not “odd,” unless other sources of “oddity” are present. Assume for conditional proof that no other sources of “oddity” are present and the agent has the inferential ability to make the right practical inference if she knows the relevant premises. Abbreviating “pure moral testimony” as “PMT,” we can now reason as follows:

- P1 Given the assumptions, the agent can make the right practical inference as a result of PMT, which makes any missing knowledge of premises available.
- P2 If the agent can make the right practical inference as a result of PMT, the agent can act virtuously as a result of PMT, given that no other sources of “oddity” are present.
- P3 If the agent can act virtuously as a result of PMT, the case of PMT is not “odd.”
- C1 So, if no other sources of “oddity” are present and a case of PMT is “odd,” then what the agent is lacking is the ability to make the right practical inferences (as opposed to knowledge of premises).

Premise P1 is an immediate consequence of the antecedent of the contraposition, which we assumed. Premise P3 is merely a way to spell out what “odd” means in this context. So the only substantive premise is P2. The idea behind this premise is that you can make the right practical inference in a given situation just in case you can act virtuously in that situation. This idea will also play an important role in the argument for the other direction of IP, to which I now turn.

The right-to-left direction of IP says that if the agent is lacking the ability to make the right practical inferences (as opposed to lacking knowledge of premises) and no other sources of “oddity” are present, then a case of pure moral testimony will be “odd.” Let’s assume for conditional proof that the agent is lacking the ability to make the right practical inferences (as opposed to lacking knowledge of premises) and no other sources of “oddity” are present. We can now state the argument as follows.

- P4 If the case is not “odd,” PMT must enable the agent to act virtuously.
- P5 If PMT enables the agent to act virtuously, PMT enables the agent to make the right practical inferences.

P6 Inferential abilities cannot be shared via testimony.

C2 So, if what the agent is lacking is the ability to make the right practical inferences (and not knowledge of a premise) and no other sources of “oddity” are present, then the case of PMT is “odd.”

This argument has the following structure: We argue for the consequent of the conditional via *reductio* inside the assumption of the antecedent. We assume that the case is not “odd,” and this leads to an absurdity because it would require that inferential abilities can be shared via testimony.

Just like premise P3, premise P4 merely spells out what it means for a case of pure moral testimony to be “odd.” The idea behind premise P5 is of a piece with the idea behind P2 above, namely that you can make the right practical inference in a given situation just in case you can act virtuously in that situation. Premise P6 is a general claim about the ability to make particular inferences. The idea is that inferring differs from judging and believing in that we cannot do it by simply accepting testimony.

In sum, then, there are two big ideas at work in the argument for Inferential Pessimism:

VIR      Someone can act virtuously in a given situation (in which no other sources of “oddity” are present) just in case she can make the right practical inference, relative to the situation.<sup>8</sup>

TES      Pure moral testimony cannot enable us to make practical inferences, except by providing knowledge of (or belief in) premises.

Having distilled these two core ideas out of the argument for Inferential Pessimism, all that is left to do is to defend these ideas and to show how the resulting view plays out in dealing with examples and objections. In the remainder of this section, I shall discuss and defend VIR and TES. In the following section, I will then spell out what Inferential Pessimism means for the debate about moral testimony and how it applies in various cases.

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<sup>8</sup> The fact that “acting virtuously” is gradable and, hence, we shouldn’t think of it as an all-or-nothing matter will come up below in my discussion of Enoch. I am simplifying matters here and in the following sections for the sake of clarity.

### 6.2.2 Virtue and Inference

Let's take a closer look at VIR. The idea is that acting virtuously is a matter of being able to make the right practical inferences. This is a version of the Aristotelian idea that being virtuous is being disposed to make the right choices (ἐξῆς προαιρετική) (Aristotle, *EN* 1106b36). For “the origin [...] of choice is desire and reasoning with a view to an end” (Aristotle, *EN* 1139a32).

Notice that it doesn't matter for the purposes of Inferential Pessimism which inferences are *the right* practical inferences, as long as someone can plausibly lack the ability to make some such inferences. Hence, I don't have to defend any particular view about what kind of practical inference leads to virtuous action. All I need is the general idea that the ability to act virtuously and the ability to make particular practical inferences are closely enough related to make it impossible to possess one ability without possessing the other. The considerations that speak in favor of this idea can be formulated in a little argument.

- (i) Someone can act virtuously in a given situation (in which no other sources of “oddity” are present) just in case she can do the right thing for the right reasons in this situation.
- (ii) Someone can do the right thing for the right reasons, in a given situation, just in case she can make the right practical inference, i.e. the one from the reasons to the action (or intention).

Therefore:

VIR      Someone can act virtuously in a given situation (in which no other sources of “oddity” are present) just in case she can make the right practical inference, relative to the situation.

The first of these ideas, i.e. (i), is familiar from both: Aristotelianism and Kantianism.<sup>9</sup> The virtuousness or moral worth of an action depends, at least sometimes, on the reasons for

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<sup>9</sup> In fact, this point has been made several times already in the literature on moral testimony, and some have built an account of what is wrong with moral testimony partly on this idea (Nickel, 2001; Hills, 2009). What I have to say is similar in spirit to such accounts. However, the source of “oddity” that I want to expose depends on a general fact about inference.

which it is done.<sup>10</sup> Two people can do the same thing in the same circumstances, and yet, if they act for different reasons, one may act virtuously while the other one does not.<sup>11</sup>

Examples that illustrate and lend support to the idea are easy to find—with Kant’s shopkeeper perhaps being the most famous among them (Kant, AA 4, p.397). Here is a different example, in which I already combined the idea in (i) with that in (ii): Tiara and Allison are in virtually the same situation; their partners are hospitalized after having had a car accident. Both visit their partners in hospital and bring them flowers. Tiara reasons thus: “She feels terrible, and having some flowers in her hospital room will make her feel better. So, I will bring her some flowers.” Allison reasons as follows: “In these kind of circumstances people always expect one to have some gift for one’s partner, and flowers are an acceptable gift. So, I will bring her some flowers.” It seems clear that Tiara acts virtuously (unless she is merely *enkratic*), while Allison does not.<sup>12</sup> This is because Tiara acts for the right reasons, while Allison does not. And this is in turn because Tiara makes the right practical inference and Allison does not.

Given that we can be very liberal regarding what counts as the right action and the right reason, such examples show that you cannot act virtuously without doing the right thing for the right reason. There may be cases in which a wide variety of reasons qualify as being “right.” But there are other cases as well, in which the only way to do something while being virtuous is to do it for very specific reasons.

Conversely, it is hard to see how you could fail to act virtuously if you do the right thing for the right reason—in a situation in which no other sources of “oddity” are present. For it seems that the only thing that could go wrong is that you are merely *enkratic*, i.e., you might not have the right desires or emotional reactions to accompany your action. That, however, would be another source of “oddity.” After all, pure moral testimony cannot help when the agent’s problem is that she is merely *enkratic*. So we can set this worry to one

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<sup>10</sup> My account can be of interest even to those who reject this claim. For even if one holds that the intuitions behind the Kantian and Aristotelian claim are misleading, it will still be interesting that what tugs on people’s intuitions in cases of pure moral testimony is the same thing that tugs on people’s intuitions regarding the Kantian-Aristotelian idea.

<sup>11</sup> Julia Markovits (2010) has recently presented a very interesting way of spelling out and defending this claim, to which we will return below.

<sup>12</sup> At least, her action is not virtuous to the same degree. I simplify matters by not talking about degrees of virtuousness. I will return to the issue below.

side. Another worry may be that one can do the right thing for the right reason without this being the manifestation of a stable disposition. It seems to me, however, that we should think of the ability to make a practical inference as requiring a stable disposition. You don't have an inferential ability if you don't have a stable disposition to reason in particular ways.

So, a compelling case can be made that acting virtuously (or with moral worth) requires doing the right thing for the right reason and that—modulo cases of merely *enkratic* agents—doing the right thing for the right reason is sufficient for an action being virtuous. So we can turn to the second idea that I used to defend VIR, i.e. (ii) above. This is the idea that one can do something for a reason just in case one can make the corresponding practical inference.

A full defense of this idea would lead us too far afield. Here it must suffice to point out that there are various plausible routes to the idea expressed in (ii). Kieran Setiya, e.g., has defended the view that a “reason for action is a premise of practical reasoning. When someone acts on the ground that  $p$ , she reasons to action or intention from the proposition that  $p$ ” (Setiya, 2014, p. 221). Thomas Aquinas, on the other hand, would probably agree with (ii)—as applied to properly human actions—on the ground that actions that don't issue from reasoning aren't human actions, properly so called.

Therefore those actions are properly called human which proceed from a deliberate will. And if any other actions are found in man, they can be called actions “of a man,” but not properly “human” actions, since they are not proper to man as man. (Aquinas, ST, Ia-IIae, q1, a1)

There is also an ‘intuitive’ or ‘naive’ route to claim (ii). After all, the right-to-left direction of (ii) is almost trivial. For if I can act as the result of a practical inference, then I act for the reasons that are given by the premises of my inference. The left-to-right direction is also plausible because if I can do something for a reason, then I should be able to arrive at my action by explicitly taking the considerations in question as my reasons—if I have enough time and other resources. The only case I can imagine in which this might fail is one in which I do something in an automatic manner without thinking about it. No doubt, there are things about which I cannot reason practically without undermining my own action. I cannot, e.g., explicitly reason my way to moving my fingers in such-and-such a particular way, starting with the premise that this would be a way of typing such-and-such a word at an



acceptable speed. However, this does not undermine (ii) because my typing is not intentional under the description of “moving my fingers in such-and-such a particular way.” I am not only not reasoning to this intention, but I’m not holding this intention (in action)—let alone on the basis of any reasons. I’m simply intending to type the word at an acceptable speed.

Finally, the Force Account offers a different route to the idea in (ii). Recall that inference stands to holding-the-conclusion-attitude-on-the-basis-of-the-premises, as judging stands to believing. In both cases, the difference is one of temporal structure. Inferring and judging are things we do at particular points in time, holding an attitude on the basis of reasons and believing are things that go on over a stretch of time. In both cases, the first element typically marks the beginning of the second element, though the second element can occur without the first having occurred. In both cases, the contrast is one between what we might call “dynamic” and “static” acts of the intellect. In the case of inference and holding-an-attitude-on-the-basis-of-another, both acts are acts of attaching inferential force to an argument. In the practical domain, the prime example of holding-an-attitude-on-the-basis-of-another is that of intending to do something on the basis of particular reasons. When we are dealing with an action that is in progress this is the idea of an intention-in-action that is based on reasons. And that simply is the idea of acting for those reasons.

When we put all this together, we arrive at the view that (ii) says that you can attach practical inferential force in a dynamic act of the intellect just in case you can also attach this kind of force in a static act of the intellect. Now, whether or not a static act of this kind is created by a dynamic act of this kind seems entirely accidental; it has nothing to do with the abilities of the agent but merely with the particular circumstances in which the agent finds herself. So if an agent has the ability to perform one of these acts, she must have the ability to perform the other. In our context, this means that if someone can attach inferential force in a static act, she can attach inferential force in a dynamic act. This is particularly plausible for the cases at hand because the relevant problem with the transmission of inferential abilities via testimony is the problem of transmitting the ‘taking’ involved in inference. Since this ‘taking’ is present in both acts, there shouldn’t be any difference with respect to transmissibility via testimony.

So we should accept (i) and (ii). Together they imply VIR. This concludes the defense of the first big idea that I used in my argument for Inferential Pessimism.

### 6.2.3 Practical Inference and Testimony

The second big idea I used in my argument for Inferential Pessimism, i.e. the one formulated in TES, is that pure moral testimony cannot enable us to make practical inferences, except by providing knowledge of premises. This is one of the core insights of the Force Account. We have seen in Section 3.2 that Ramanujan’s testimony cannot enable Hardy to infer “The number of the cab is the smallest number expressible as the sum of two positive cubes in two different ways” from “The cab number is 1729.” This is so even if all that Hardy is lacking is that he cannot ‘take’ the inference to be good.

The Force Account explains why the ‘takings’ involved in inferences cannot be shared via testimony. For it tells us that these ‘takings’ are not propositional attitudes in their own right. Rather, ‘taking’ one’s inference to be good is to attach inferential force to an argument. And the act of attaching force is simply not the kind of thing that can be shared via testimony. Moreover, we cannot make an inference (as a whole) on the basis of testimony because there is no such thing as inferring a conclusion from certain premises on the basis of something else (see Section 4.5.3).

This phenomenon is a completely general one. It arises for practical inference just as much as for theoretical inference. So let’s see how the idea plays out in the practical case. I can explain to you how to open my suitcase, e.g., by saying “slide the two buttons away from one another and then push them in.” If all goes well, I thereby enable you to open my suitcase. In contrast to this, I cannot enable you to reason instrumentally by saying, “Given an intention to do  $\phi$ , you first think that doing  $\psi$  is a way of doing  $\phi$ . And then you conclude with an intention to do  $\psi$ .” The problem is not just that you would need to reason instrumentally in order to apply my instructions (Dreier, 2001; Brunero, 2005). I cannot enable you to make any kind of practical inference in this way, unless I make you ‘see’ in what way the premises speak in favor of performing the action in which the inference results.

We can confirm this by looking at an example that is analogous to the Ramanujan example from Chapter 3. Imagine a moral saint who immediately ‘sees’ what any given situation calls for, even in very difficult situations. Now suppose that I must decide whether to shoot down an airplane full of innocent people or else to refrain from doing so, thereby taking a substantial risk that a major international war breaks out.<sup>13</sup> I have only two minutes to make a decision. Luckily, I have said moral saint with me as my adviser. She tells me that the practical inference from “If I don’t shoot down this airplane full of innocent people, a major war is likely to break out” to “So I shall shoot down the airplane” is a good practical inference. The connection is simply obvious to her. She can ‘see’ that this is a good reason to shoot down the airplane without any intermediate reasoning, just as Ramanujan can immediately ‘see’ that “The number of the cab is the smallest number expressible as the sum of two positive cubes in two different ways” follows from “The cab number is 1729” (see Section 3.2). Can her testimony enable me to make the same single-step inference? Clearly not. Of course, I may be able to reason as follows: “If I don’t shoot down this airplane full of innocent people, a major war is likely to break out. And as the moral saint just told me, this is a good and conclusive reason to shoot down the airplane. So I shall shoot down the airplane.” But this is not the practical inference that the moral saint made, just as Hardy’s inference is not the one Ramanujan made.

I may be able to check whether the saint’s inference was indeed a good one by subjecting her to various questions, such as: Does the goodness of the inference have to do with double-effect? Is this a weighing of the number of deaths? What could I possibly say to the families of the people on the airplane? Etc. Or maybe I can answer these questions myself by consulting the correct ethical theory. None of this, however, will enable me to make the inference that the moral saint is making, unless it also enables me to appreciate the goodness of the inference for myself.

Just as the Force Account predicts, we encounter the exactly parallel scenario in the domain of practical inference that we have already seen in the domain of theoretical inference. It is the same phenomenon, and the same explanation applies. So testimony cannot enable

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<sup>13</sup> For the record, I am not putting my own moral views into the mouth of the moral saint here.

us to make particular practical inferences. *A fortiori* pure moral testimony does not enable us to make particular practical inferences; i.e., TES is true.

Given that we should accept VIR and TES, we can now see that the argument for Inferential Pessimism goes through. So we now know that, unless other sources of “oddity” are present, pure moral testimony is “odd” just in case, and because, what the agent is lacking is the ability to make the right practical inferences (as opposed to lacking knowledge of a premise).

An opponent may wonder, however, whether there are actually any such cases in which the recipient of pure moral testimony is lacking an inferential ability. Moreover, the opponent may wonder whether such cases, if they exist, account for much of the “oddity” discussed in the literature on pure moral testimony. In order to address such worries, I shall next look in more detail at how the lack of an inferential ability explains many cases of “oddity.”

### 6.3 INFERENCEAL PESSIMISM AT WORK

In Section 6.1.2, I have described a threefold task with respect to the “oddity” we find in cases of pure moral testimony: (i) to identify sources of “oddity,” (ii) to explain how the “oddity” derives from the source, and (iii) to determine to what extent the result of (i) and (ii) support optimism or pessimism about pure moral testimony. In the previous section, I have argued that the lack of an inferential ability can be a source of “oddity” in cases of pure moral testimony; i.e., I have made a suggestion regarding (i). But what about (ii)? How does the lack of an inferential ability explain what goes wrong in (some) cases of pure moral testimony?

The explanation of “oddity” that Inferential Pessimism offers is this: Sometimes an agent is in a situation in which she should do  $\phi$  for the reason that  $P$ . Moreover, the agent knows that  $P$ . Unfortunately, the agent does not ‘see’ how or why  $P$  speaks in favor of doing  $\phi$ . Now the agent receives reliable and trustworthy testimony to the effect that the practical inference from  $P$  to doing  $\phi$  is a good one. The informant might, e.g., say “ $P$  is a conclusive reason, in your situation, to do  $\phi$ .” Given the arguments in the previous section, this will

not enable the agent to do  $\phi$  for the reason that  $P$ . Now, the agent may do  $\phi$  for some other reason than  $P$ .<sup>14</sup> The agent might, e.g., reason as follows: “ $P$ . And this is a good reason to do  $\phi$ . So I shall do  $\phi$ .” Or the agent might do  $\phi$  for any number of other reasons. At this point, three things can happen.

- (A) The practical inference that the agent actually makes is not a good inference.
- (B) The practical inference that the agent makes is a good inference but the premises of the inference have nothing to do with what the agent has learned by testimony.
- (C) The practical inference that the agent makes is good, and what the agent learned from testimony figures in the premises of the inference.

In case (A), an “oddity” arises because the testimony didn’t enable the agent to act virtuously. In case (B), we misdescribe the case when we say that it is a case of pure moral testimony. After all, the agent neither needs nor uses the testimony. In case (C), we have a case of pure moral testimony that is not “odd,” unless another source of “oddity” is present.

The explanation that Inferential Pessimism offers raises two issues. First, one might wonder whether there really are any cases in which pure moral testimony cannot be used as a premise in a good practical inference. Second, one may wonder why the problem to which I am pointing should be particularly important in the moral domain. I address these two issues in the following two subsections respectively. I then turn to a discussion of examples.

### 6.3.1 Reasoning From What One Should Do

We can formulate the first issue as a challenge: Moral testimony gives me information about what I should and should not do. Everyone who is responsible for what she does can make the following simple practical inference: “I should do  $\phi$ . So I shall  $\phi$ .” If moral testimony does not allow me to arrive at the judgment that I should do  $\phi$ , then it simply does not give me the kind of information that is relevant in my situation. But if it does, then I can make a good practical inference that results in me doing  $\phi$ . So the case that Inferential Pessimism is concerned with cannot arise.

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<sup>14</sup> There is another option: The agent could realize that  $P$  is a reason to do  $\phi$  for herself. If she does, however, the case ceases to be a case of pure moral testimony.

The short reply to this is that if you think that practical inferences of the shape “I should do  $\phi$ ; so I shall  $\phi$ ” are always good, then you should be an optimist. That option is left open by Inferential Pessimism; this is one of the ways in which my position is unlike standard pessimism. The important point is that your views on what is a good practical inference and on how widespread the “oddity” of pure moral testimony is should covary. The more liberal you are in saying that a piece of practical reasoning is good the more liberal you should be in allowing for unproblematic cases of pure moral testimony.

However, and this is an additional point, I think that practical inferences of the shape at issue are not always good. This is why I call my position a kind of pessimism. The easiest way to realize that some inferences of this kind are bad is to look at some examples, such as the following:

- I-1      I should refrain from killing my parents. So I shall refrain from killing my parents.
- I-2      I should be grateful towards this person. So I shall be grateful towards this person.
- I-3      I should treat my partner in a respectful way. So I shall treat my partner in a respectful way.

We are no doubt often in situations in which the best thing we can do is to reason in this kind of way. But I find it incredible that in such situations, we are doing the right thing for the right reasons. After all, I should refrain from killing my parents because they are human beings. I should be grateful towards people if and because I have received an undeserved favor from them. And I should treat my partner with respect because failing to do so would hurt and humiliate my partner. If I reason in the way exemplified in I-1 through I-3, this shows that I am not properly attuned to the normative reasons for which I should perform the actions that result from my reasoning.

The strongest position regarding this issue is perhaps occupied by Julia Markovits when she says that “morally worthy actions are those performed for the reasons why they are right” ([Markovits, 2010](#), p. 202). This implies that in the cases just mentioned I don’t act with moral worth because the reason why it is right not to kill my parents is not that I should refrain from killing my parents, and similarly for the other cases. A much weaker view, however, suffices to make my point. If I first need to arrive at the view that something

is permitted or obligatory before I can form the intention to do it, this normally shows a lack of virtue. For it shows that I lack the ability to realize without reluctance or obstacles what action my situation calls for. Perhaps the premises of my inference don't always have to be the reasons why the action is right, but they should be about the things that virtue allows us to pick up on. Occasionally this might be the fact that I ought to do something, but that is a rather special case.

What I just said applies not only to inferences of the form "I should do  $\phi$ . So I shall do  $\phi$ ." It also applies to inferences of the form " $P$ , and this is a good reason to do  $\phi$ . So I shall do  $\phi$ ." After all, it shows a lack of virtue that I must add the second conjunct in order to get to the conclusion. The virtuous agent, by contrast, can directly appreciate the reason giving force of  $P$ .

The point can be illustrated with a variation on a case due to Bernard Williams (1981). Suppose that a man could save one, but not both, of two people in equal peril. One of them is his wife. Moreover, suppose that the following is a good practical inference, given the circumstances: "These two people are in equal peril and I can save only one of them. She is my wife. So, I will save her." The man is not sure whether this is a good practical inference. After all, shouldn't morality be impartial? He asks a reliable and trustworthy informant whether this practical inference is good. He receives a positive answer, where this is a case of pure moral testimony. Our hero then rescues his wife. As the testimony cannot have enabled the man to make the inference just mentioned, he must have made another practical inference. Let's suppose it is this: "These two people are in equal peril and I can save only one of them. She is my wife. And these are good reasons to save her. So, I shall save her." Here something similar to what Williams said about his original case holds:

[T]his construction provides the agent with one thought too many: it might have been hoped by some (for instance, by his wife) that his motivating thought, fully spelled out, would be the thought that it was his wife, not that it was his wife and that in situations of this kind it is permissible to save one's wife. (Williams, 1981, p. 18)

The reasoning of the man betrays a lack of virtue. We might say that his practical inference has one premise too many. Moreover, we can say this while claiming that the testimony is true and that our hero comes to know the proposition expressed by the testimony. The testimony did not put him in a position to make the inference that the testimony was about.

The problem of our hero is such that he cannot be helped by being given testimony. That is why this case of pure moral testimony is “odd.”

We don’t have to decide here whether Markovits or Williams are too stringent in their assessment of what the premises of a good practical inference must be. It suffices to see that it is implausible that we have *carte blanche* to use premises like “I should do  $\phi$ ” or “ $P$ , and this is a reason to do  $\phi$ ” whenever we want. This does not preclude us from acknowledging that sometimes such inferences may be the best practical inferences an agent can make. If that happens in a case of pure moral testimony, the correct verdict will be that the agent did the best she could but still isn’t acting (fully) virtuously.

### 6.3.2 Morality and Practical Inference

The second issue can again be raised in the form of a challenge: I advertised my view as a novel form of pessimism. But pessimists think that there is something special about *moral* testimony. On my account, however, the problem that we witness in cases of pure moral testimony can also arise in the theoretical domain. In fact, it is not clear why the problem I have described should be especially relevant in the moral case.

My account applies indeed to the theoretical case as well as to the practical case. It seems to me, however, that this is a virtue rather than a vice. Cases in which the same problem will arise in the theoretical domain are cases in which testimony could only help the recipient if it enabled her to make particular inferences. Such cases exist in domains where we care about how someone arrives at her beliefs. A prime example of such a domain is mathematics. We can learn by testimony that a mathematical proposition is true, but this is not a way to become a mathematician—or at least the role of testimony is rather limited here. In order to be a mathematician, you must be able to reason about numbers, sets, and the like. In this respect being a mathematician is similar to being a virtuous agent, as Elizabeth Anscombe already noticed some time ago:

[I]t was wrong, in the list of teachable things with which to contrast morality, to put mathematics alongside the others. “Be ye doers of the word and not hearers only” I once saw as the motto of a chapter in a big textbook of higher mathematics, and it was right; one does not learn mathematics by learning that mathematical propositions are true, but by working out their proofs. ([Anscombe, 1981](#), p. 45)



I am happy to accept this consequence of Inferential Pessimism. In fact, I think that this is an illuminating consequence of Inferential Pessimism. It brings out why and in what way being a virtuous moral agent is more like being a good mathematician than like being a good historian. You can become a better historian—I assume—by receiving testimony regarding historical facts. By contrast, you cannot become a better mathematician by receiving testimony regarding mathematical facts. This is because being a virtuous agent and being a good mathematician both crucially involve possessing certain inferential abilities. Inferential abilities, however, cannot be shared via testimony.

The idea that morality's central concern is the goodness of practical inferences shouldn't be surprising, given that I have already argued that being virtuous is a matter of making the right practical inferences. How far can we push this line of thought? It seems to me that there are three levels at which we might apply this idea with increasing, but perhaps manageable, difficulties:

1. *The level of reasons for action*

Moral philosophy is to a large part concerned with what is a reason to do what. It is not difficult to think of this in terms of the goodness of practical inferences. All we need is a principle of roughly the following shape:  $P$  is a reason to do  $\phi$  just in case it is a good practical inference to reason from  $P$  to doing  $\phi$  (or an intention to do it).

2. *The level of permissions and prohibitions*

Moral philosophy is to a large part concerned with the question which actions are morally permissible and which ones are morally prohibited, if any. We can think of this issue as an issue regarding the goodness of inferences by quantifying over practical inferences that are in principle possible. We could say, e.g., that an action is prohibited just in case there are no (or only very unusual) circumstances in which an agent could make any good practical inference (from any premises) that resulted in the action. And an action is permissible just in case it is not prohibited.<sup>15</sup>

3. *The level of axiology*

Moral philosophy is to a large part concerned with the question what is good or valuable.

One way to think of these issues as questions that ultimately turn on the goodness of

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<sup>15</sup> Matthew Hanser (2005) has recently suggested a theory of this kind.

practical inferences is to adopt Thomas Scanlon’s “buck-passing” account of value and claim that “to call something valuable is to say that it has other properties that provide reasons for behaving in certain ways with regard to it” (Scanlon, 1998, p. 96). For this would reduce the problem to one at the first level.

We don’t need to pass judgment on such large issues as whether the “buck-passing” account of value is correct. It suffices to notice that many moral claims are arguably ultimately concerned with the goodness of practical inferences. This makes it understandable that the fact that inferential abilities cannot be shared via testimony reverberates much more throughout the moral domain than the theoretical domain. After all, if the ultimate upshot of a moral claim is typically that such-and-such practical inferences are good (or are not good), then Inferential Pessimism—and thus the Force Account of inference—explains why you typically cannot do a lot with such claims if you learn them by testimony.

Let’s sum up. Whenever the recipient of testimony has a problem that can only be solved by the acquisition of inferential abilities, merely giving her testimony will not solve the problem. In the moral domain this leads to “oddity” in cases of pure moral testimony. The same problem, however, shows up, e.g., in mathematics, when someone tries to make someone a better mathematician by giving testimony about mathematical facts. That this phenomenon is more important in the practical case is explained by the importance of good practical reasoning for morality.

### 6.3.3 Examples

So far, what I said was, for the most part, fairly abstract. I did not discuss any examples in detail. In this subsection, I will put my account to the test by applying it to a couple of cases that have been discussed in the literature on pure moral testimony. I shall argue that in each case Inferential Pessimism gives the intuitively correct verdict.

In one well-known case the heroine, Eleanor, bases her decision to become a vegetarian on the testimonially acquired belief that eating meat is wrong (McGrath, 2009; Hills, 2013; Sliwa, 2012). Most people seem to agree that there is something “odd” about Eleanor’s decision to stop eating meat. While Sarah McGrath and Alison Hills think that the case is

“odd” because there are general reasons that make it objectionable to form one’s moral beliefs in such a way or to act accordingly, Paulina Sliwa holds that the “oddity” arises because it is a controversial question whether eating meat is wrong and one should not form beliefs on the basis of testimony when the issue is a controversial one. Now, Sliwa’s explanation cannot be a complete explanation; for the “oddity” does not go away if we stipulate that all moral experts agree that eating meat is wrong.<sup>16</sup>

My alternative explanation is this: Suppose that eating meat is wrong. This means that there is some good practical inference that has the conclusion: “So, I shall not eat meat.” Now, being told that there is a good practical inference with this conclusion does not put Eleanor in a position to make such an inference. The testimony only puts Eleanor in a position to make a practical inference like this: “Eating meat is wrong. I shall not do what is wrong. So, I shall not eat meat”—assuming that Eleanor was all along able to make this inference and was merely lacking belief in the first premise. However, the fact that eating meat is wrong does not imply that this practical inference can lead to virtuous action. Maybe the only practical inference with the conclusion “So, I shall not eat meat” that can lead to virtuous action has “Eating meat causes unnecessary suffering” as a premise. Eleanor might know that eating meat causes unnecessary suffering, but she cannot ‘see’ how or why this speaks in favor of being a vegetarian. Hence, Eleanor ends up acting in a way that is not virtuous by becoming a vegetarian. And so the case is “odd.”

My explanation depends on the assumption that the practical inferences that Eleanor can make (partly based on testimony) to the conclusion “So, I shall not eat meat” are not good practical inferences. I do not want to decide whether this assumption is true. This does not undermine my explanation because if someone convinces me that the testimony puts Eleanor in a position to make a good practical inference with the conclusion at issue, this will also convince me that Eleanor can act virtuously based on the testimony by becoming a vegetarian, i.e., that there is nothing “odd” about the case. Hence, I hold that my explanation

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<sup>16</sup> We can, e.g., imagine that tomorrow someone comes up with an airtight argument showing that it follows from all plausible moral theories that eating meat is wrong. We tell Eleanor this, and she comes to be a vegetarian without ever looking at the argument. I cannot imagine that someone who finds the initial case “odd” would not find this case “odd” as well.

identifies precisely the question that needs to be settled in order to tell whether the case really is “odd.” So, Inferential Pessimism gives the right verdict either way.

Let’s move on to a second case. David Enoch (2014) has presented a case that he uses to argue for optimism. He imagines himself in a situation in which he must decide whether or not to vote for funding an armed conflict between Israel and Palestine.

Whenever yet another violent interaction erupts in the Middle East, Israel sees (like most other places, I think) a rallying-around-the-flag initial reaction of its public opinion. [...] In the past, I have noticed that I too seem to go with the flow on these matters. In the first few days—weeks, sometimes—I tend to see the war as in-principle justified. But often, within a couple of weeks, I come to see the war [...] much more critically. [...] But I have this colleague—Alon, let’s call him—who is different. For he—I noticed—voices the moral criticism I come to endorse as the war proceeds much earlier, indeed, from its very outbreak. [...] Another armed conflict erupts. [...] It seems to me that we are by-and-large in the right. But I talk to Alon, who once again tells me how wrong this whole affair is. (Enoch, 2014, pp. 230–31)

Enoch argues that, in this case, he should accept Alon’s testimony and vote against funding the war on this basis. As before, the crucial question from the perspective of Inferential Pessimism is whether Alon’s testimony enables Enoch to make a good practical inference with the conclusion “So I shall vote against funding the war.” If the answer is “no,” the case will be “odd” and Inferential Pessimism will explain why. If the answer is “yes,” the case will not be “odd”—given that no other sources of “oddity” are present—and Inferential Pessimism will again give the right verdict.

Now, this case involves two important complications. First, Enoch actually admits that a virtuous agent would not act with the intention with which he acts in the example.

The right intention to have in the war case is the intention (perhaps roughly) not to inflict disproportionately great harm on innocents; *this* is the intention with which the virtuous would vote against funding the war, and—when I rely on Alon—I lack this intention. True, I have another intention, and a good one too—the intention not to subject others to greater-than-necessary risk of being wronged by me. And given that I lack the previous intention, it is better that I at least have this one. Still, I lack the intention it would have been best for me to have. This partly explains the fishiness. (Enoch, 2014, pp. 256–57)

What Enoch wants to show is that, all things considered, he should rely on Alon’s testimony and vote against funding the war. As I pointed out above, Inferential Pessimism can allow that we sometimes ought to act in this way. For sometimes a practical inference in which we use what we learned by testimony as a premise is the best inference available to us, even if it

is not the one that leads to virtuous action. Now, Enoch seems to think that he makes only a minor concession to pessimism by admitting that his intention in the example is not virtuous. I surmise that this is because of his robust moral realism, on which considerations about virtue are mere afterthoughts to knowledge of independent moral facts (see [Enoch, 2011](#)). Once we reject this picture and acknowledge that considerations of virtue are fundamental to all moral assessments, it becomes clear that it is the inferential pessimist who can easily accommodate Enoch's example.

The second complication has to do with how we spell out the fact that sometimes the best someone can do is to make a practical inference that doesn't lead to a virtuous action—and here it might be helpful to say “*fully* virtuous action.” In particular, Enoch's case raises the question what should count as a (reasonably) good practical inference in a situation in which the agent has good reason to think that her practical rationality is impaired. After all, in the example, Enoch has good reason to think that he is under the influence of emotional or social pressures that impair his ability to reason practically and that Alon's ability to reason practically is in better working order. There are two ways to go here. We can either say that Enoch's practical inference is the best he can make but is not good and, hence, does not result in virtuous action. Or we can say that what counts as a good practical inference varies with the inner and outer circumstances of the agent. We could express this by saying: “Relative to his circumstances, Enoch's practical inference is a good one.” This will allow us to say: “Relative to his circumstances, Enoch is virtuous in voting against funding the war on the basis of Alon's testimony.” Given how far all of us are from being fully virtuous, the second way of talking will typically be more helpful. Moreover, any virtue-theoretic ethical theory will need a distinction like the one between “fully virtuous” and “virtuous relative to the circumstances.” After all, there are well-known cases in which the less-than-fully-virtuous agent should not act or reason as the fully virtuous agent would act or reason.<sup>17</sup> The upshot of all this is that once we spell out the virtue-theoretic framework, Inferential Pessimism has room for making all the subtle distinctions one may wish to make regarding Enoch's example. This makes the verdict of Inferential Pessimism even more plausible.

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<sup>17</sup> The best known example is perhaps the one of the irascible squash player who, in contrast to the fully virtuous agent, shouldn't shake hands with his opponent because he would “smash him in the face” ([Smith, 1995](#), p. 111).

A third case, which Karen Jones (1999) uses to argue that not all cases of pure moral testimony are problematic, is the case of Peter. Peter lives in a fourteen-person cooperative house, and he relies on the testimony of his roommates to arrive at the judgment that a candidate who wants to move in with them is sexist and should be rejected.<sup>18</sup> Peter knows that he is not very good at telling whether someone is sexist, and he thinks that if someone is sexist, he ought to be rejected as a potential roommate. According to Inferential Pessimism, the crucial question is whether the testimony puts Peter in a position to make a good practical inference with “So, I shall vote against this person as a future roommate” as its conclusion. Maybe there is a good practical inference to this conclusion from the premise: “This guy is sexist.” If this is correct, as I personally think it is, this vindicates Jones’s view that the case is not “odd.” However, one might also hold that the only good inference to the conclusion would be something like: “This guy gave my roommate this particular look. So, I shall vote against him.” And perhaps Peter cannot make this inference. In this case, Peter must have arrived at his action via a practical inference that is not good. Hence, his action is not virtuous, and the case is “odd.” Again, Inferential Pessimism isolates precisely the question that needs to be answered in order to decide whether the case really isn’t “odd,” as Jones claims.

I hope that these three examples allow the reader to treat new cases using my account. The question will always be: Does the testimony put the agent in a position to make a good practical inference? If the answer is “yes,” the testimony enables the agent to act virtuously, unless other sources of “oddity” are present. The most straightforward case in which the answer is “yes” is one in which the testimony makes a premise available. If the premises are already available to the agent and she nevertheless cannot make the inference, pure moral testimony will not enable the agent to make the practical inference in question. Such cases will be “odd,” and this “oddity” will be explained by Inferential Pessimism.

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<sup>18</sup> One might doubt that this is really a case of moral testimony. After all, one might hold that “sexist” is a thick moral—or perhaps even a purely descriptive—term. Here I assume, for the sake of the argument, that Jones (1999, p. 61) is right in thinking that this is a case of moral testimony.

## 6.4 TAKING STOCK

In this chapter, I have argued that whether an action is virtuous often depends on the practical inference that leads to the action. Sometimes we cannot make the practical inference that we should make because we lack knowledge of some of the premises. Pure moral testimony can be of help in such cases. Sometimes, however, we cannot make an inference because we lack the right inferential abilities. In this case, pure moral testimony is of no help because inferential abilities cannot be shared via testimony.

The explanation Inferential Pessimism offers applies not only to pure moral testimony but to any kind of testimony that could only do what it is meant to do if it could enable the recipient to make particular inferences. This problem comes up more often in the practical domain than in the theoretical domain because being virtuous is a matter of having inferential abilities. In that respect, being virtuous is like being a good mathematician and unlike being a good historian.

How does this view compare to other explanations offered in the literature? My account shares at least three aspects with some extant accounts of what is wrong with pure moral testimony: First, I hold that the problem with pure moral testimony has to do with the fact that morality is a matter of doing something, not merely a matter of believing something ([Anscombe, 1981](#)). Second, according to Inferential Pessimism, what is crucial for being virtuous is often a special kind of “understanding;” the agent must ‘see’ the right connection between the premises and the conclusion, i.e., she must ‘take’ her inference to be good. Some leading pessimists are right in thinking that this kind of “understanding” cannot be transmitted via testimony ([Hills, 2015, 2013, 2009](#); [Nickel, 2001](#)). Inferential Pessimism can explain why, and it shows us how this fact is related to similar facts in the theoretical domain. Third, I focus on the use we can make of moral testimony and not on whether we can acquire moral knowledge ([Hopkins, 2007](#)). Inferential Pessimism does not imply that we cannot acquire knowledge about moral facts through testimony. I think of this as a virtue; the “oddity” of pure moral testimony is an “oddity” of acting on such testimony not an oddity of “believing” what one is told. Here I am in agreement with the recently

emerging “consensus [...] that moral knowledge can be transmitted via testimony” ([Driver](#), 2015, p. 27).

Inferential Pessimism goes beyond any extant account of the “oddity” that can arise in cases of pure moral testimony in that it explains it by drawing on a general theory of inference. The Force Account gives us an attractive unified view on inference that allows us to reach interesting results in moral philosophy, as well as in epistemology. This confirms the idea that theoretical and practical inference should be treated in a parallel fashion. It lends some indirect support to the Kantian idea that theoretical and practical reason are ultimately one; that there can “in the end be only one and the same reason that is distinguished merely in its application” ([Kant](#), AA 4, p. 391).



## 7.0 CONCLUSION

In this final chapter, I want to summarize what I take to be the result of this dissertation and to point to possible generalizations and implications. In the previous six chapters, I have motivated, laid out, and defended the Force Account of inference. According to this account, making an inference is the act of attaching an inferential force to an argument, where this settles the attitude of the thinker toward the conclusion of the inference. We attach inferential force to an argument by ‘taking’ the thereby constituted inference to be a good inference of its kind. What kind of inference it is is determined by the kind of force attached in the act, and this also determines the norms that apply to the inference.

This account can not only explain the Inferential Moorean Phenomenon and the *Je-meinigkeit* of inference, but it can also explain how we arrive at new beliefs and intentions by making inferences. I offered such an explanation by spelling out how inferential forces interact with other forces. Attaching inferential force brings the thinker’s attitudes to conform to norms of rationality. It settles the thinker’s attitude towards one of these contents in light of the thinker’s attitudes toward the other contents and the rigidity of these attitudes.

Moreover, the account does not succumb to standard objections against the view that inference requires the inferring subject to ‘take’ her inference to be good. The Force Account is not undermined by the Sophistication Objection because you can ‘take’  $S$  to be  $F$  without possessing the concepts you would need to possess in order to believe that  $S$  is  $F$ . The Force Account does not fall prey to regress objections because the ‘taking’ involved in inference is justified just in case the thereby constituted inference is rational. And we can explain what it means for an inference to be rational without relying on the idea of justified ‘takings.’

Finally, I have shown that the Force Account is fruitful. It can be brought to bear on questions in epistemology and moral philosophy. In particular, we have seen that the account can help us to resolve debates about inferential internalism and moral testimony.

Along the way, we have also seen that the Force Account is in an excellent position to uncover problems of other theories of inference. It brings out, e.g., why it is not enough to accommodate the letter of Boghossian's Taking Condition by saying that the 'taking' involved in inference is an intuition or seeming. Similarly, it makes clear in what respects these 'takings' differ from beliefs.

I take all of these points to be important advantages of the Force Account. Together they constitute an impressive case, I think, for accepting this view.

In the remainder of this chapter, I want to do two things. First, I want to say what I think are the deepest lessons that we should learn from the Force Account of inference (Section 7.1). Second, I want to explain that the Force Account of inference is merely an example of a general kind of view regarding acts of reason (Section 7.2). These two points should bring out the deep and wide-ranging importance of the arguments presented in this dissertation. At the same time, they point the way forward to a whole array of questions that still await systematic investigation.

## 7.1 WHAT HAVE WE LEARNED?

What are the deepest insights—if there are any—that we should take away from this dissertation? In order to address this question, it will be helpful to start with a list of the core claims for which I have argued in this dissertation:

- (1) If someone makes an inference, she 'takes' her inference to be a good inference of its kind, i.e., she 'takes' the inference to live up to the norms that govern it *qua* the kind of inference that it is.
- (2) This 'taking' is neither a belief or judgment nor an intuition or seeming.
- (3) Rather, this taking-one's-inference-to-be-good stands to the act of inferring as taking-one's-judgment-to-be-true stands to the act of judging.

- (4) To make an inference of a particular kind is to attach a corresponding kind of inferential force to an argument.
- (5) We can spell out what attaching inferential force is by pointing to three features of it:
  - (a) by attaching an inferential force we make it the case that particular norms govern the thereby constituted act, (b) the inferential force gives the inference its form (in a broadly Aristotelian sense), and (c) we attach an inferential force by reflectively endorsing the thereby constituted inference as living up to the norms that thereby govern it.
- (6) In attaching an inferential force to an argument, the agent settles her attitude toward the conclusion of the inference; how this happens is determined by the attitudes the agent already holds, in particular by their assent-rank and their rigidity. It is crucial to distinguish assent-rank from rigidity.
- (7) Inference is active in that it is constituted by an endorsement of the inference as correct.
- (8) Inference is self-conscious in that it is in transparent rational tension with beliefs like “The inference I am right now making is not a good inference.”
- (9) No vicious regress arises because the ‘taking’ is the form of the inference; this implies that the justification of ‘takings’ collapses into the rationality of the inference as a whole.
- (10) The Force Account explains when and why something is wrong with pure moral testimony because it implies that inferential abilities cannot be shared via testimony.

The overall picture that these claims give us is one on which inference is in important respects similar to judgment. We must distinguish the form of an act of inferring from the content of the act. The form is not an additional act or attitude over and above the inference. Nevertheless, the form of inference is a reflective endorsement of the inference as correct. The key idea that stands behind the whole approach is that these two claims are compatible. The form of an inference is not an extra attitude but it is nonetheless an endorsement of the inference as correct.

So I think that the core insight we should take away from this dissertation is that the endorsement of an act of reason as correct can be a formal feature of the act and not an extra act or attitude. All of the ten theses just listed are merely ways of bringing out or applying this insight. Thesis (1) puts the topic of the endorsement on the table. Thesis (2) states that this endorsement is none of the acts or attitudes one might expect it to be.

Theses (3)-(6) are ways of spelling out the core insight in more detail. And theses (7)-(10) are ways of connecting the idea to various topics in the vicinity.

Another way of formulating the core insight is this: There is a way of endorsing an inference as living up to the norms that govern it that is internal to the inference itself. There is a way of being onto the goodness of inferences that is neither a belief nor an intuition. Rather, it is an aspect of the act of inferring itself. Thus, there are ways of being onto facts that are not contentful acts or attitudes in their own right; they are merely aspects of further acts or attitudes. There is something that lies between believing that  $x$  is  $F$  and treating  $x$  in a way that is appropriate just in case  $x$  is  $F$ . There is a way of ‘taking’  $x$  to be  $F$  that transparently and immediately commits the subject to  $x$  being  $F$  without being an attitude toward “ $x$  is  $F$ ” in its own right.

This idea is deeply anti-representationalist. The kind of endorsement at issue is not a matter of representing to oneself that the inference is correct. Rather, the endorsement lies in the manner in which one is thinking. The idea is that we can ‘take’ things to be thus and so without representing things as thus and so but by merely thinking about other things in a particular manner.

Let me now turn from the core insight itself to a conjecture regarding why it is important. I think that the idea is of great importance because I think that our most fundamental relation to philosophically crucial things is this ‘indirect’ or ‘implicit’ way of ‘taking’ them to be thus and so. In particular, our most fundamental ‘take’ on the goodness of inferences is ‘taking’ inferences to be good by making them. But our ‘take’ on which inferences are good is our ‘take’ on what is a reason to believe what and what is a reason to do what. It is our ‘take’ on what we should think and do, given a particular situation. Thus, our most fundamental grip on what we should think and do is present in the ‘taking’ involved in inference.

I see a large part of philosophy as the project of formulating this ‘take’ explicitly, filling in details, systematizing it, and occasionally correcting it. In other words, the ‘taking’ involved in inference is the raw material from which philosophy is made. We may distinguish two strands in this view. The first is the idea that most of our philosophical debates about knowledge, rationality, morality, and meaning ultimately boil down to debates about the

goodness of inferences. The subject matter of the ‘takings’ involved in inference and the subject matter of philosophy overlap to a large extent. The second strand is the idea that in doing philosophy we are drawing on our current inferential practices and abilities as ultimate bedrock. Philosophers sit on their inferential abilities and practices as on Neurath’s boat; they can transform these abilities and practices but they cannot build up new ones from scratch. There is no place to stand outside a ‘take’ on what is a reason to do and think what.

I don’t want to deny that there are topics in philosophy that don’t boil down to questions about the goodness of inferences or that philosophy sometimes hits bedrock at beliefs everyone shares. I do claim, however, that such cases are atypical. In other words, if god told us what is a reason to believe what and what is a reason to do what, then—I claim—most disputes in philosophy could be solved. Unfortunately, we couldn’t make much use of this knowledge outside of philosophy because inferential abilities cannot be shared via testimony. The reason why philosophy is centrally concerned with what is a reason for what, I think, is that philosophy aims to give us orientation in our practical and theoretical thinking. This orientation is needed in particular because our fundamental ‘take’ on what is a reason for what doesn’t come already explicitly articulated and systematized. We turn to philosophy for that.

To sum up, the core insight of this dissertation is that there is a way of endorsing an inference that is a formal feature of the inference itself and not an act or attitude in its own right. We can ‘take’ things to be thus and so without enjoying an independent act or attitude toward the content that things are thus and so. This core insight is of crucial importance, I think, because our most fundamental grip on what is a reason for what is that of ‘taking’ an inference to be good by making it. In fact, I think that this fundamental grip is the raw material from which philosophy is made.

## 7.2 ACTS OF REASON IN GENERAL

I said in the introduction that I am ultimately interested in what it means to possess reason, i.e., what it is to be a rational creature. Given that the ability to make inferences is a crucial part of possessing reason and that I have explained what it means to make an inference, we have made considerable progress on this front. But we can say even more. The observations I have made in this dissertation can be generalized beyond the case of inference. Indeed, my treatment of inference is merely an example of a general way of thinking about manifestations of the intellect. In this final section, I want to hint at implications of my view and a potential line of development that go beyond the topic of inference.

As Kant has observed, there is a wide and a narrow notion of reason. Reason in the wide sense comprises the intellect, judgment and reason in the narrow sense; it contrasts with sensibility (see [Kant](#), KrV, B863/A835). Reason in the narrow sense can be understood as the “faculty of inferring” ([Kant](#), KrV, B386/A330). Using this terminology, without worrying about what Kant did with it, I want to suggest that my views on inference are an application of a more general view about acts of reason in the wide sense. In other words, analogous considerations apply to all manifestations of our rational capacities, as opposed to our sensible capacities.<sup>1</sup> In this section, I want to sketch the generalized view about acts of reason in the wide sense. I cannot argue for the general view here. I hope that what I have said about inference lends some plausibility to the generalized view as well.

I have argued above that to make an inference is to attach an inferential force to an argument. Moreover, I have argued that we attach inferential force to an argument by reflectively endorsing the thereby constituted inference as living up to the norms that (thereby) govern it. I developed these ideas in an analogy with judgment.

Let’s formulate our ideas about inference and judgment in a way that is abstract enough to apply to all acts of reason. For every act of reason in a wide sense,  $A$ , there is a corresponding kind of force,  $F_A$ . Engaging in an act of kind  $A$  is to attach force  $F_A$  to a content

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<sup>1</sup> I will not try to determine where the boundary between rational and sensible capacities lies. I don’t even think that what I say in this section is in conflict with the view that rational capacities are passively at work in acts of sensibility, e.g., in the guise of a Kantian faculty of imagination. What I say applies only to manifestations of rational capacities that are actively at work.

(in a sense of “content” that includes arguments). We attach force  $F_A$  to a content  $P$  by reflectively endorsing the thereby constituted act of kind  $A$  with content  $P$  as living up to the norms that govern it *qua* the act it is. The force gives the act its nature or essence, and it unifies the act. By being an act of kind  $A$  the act is essentially governed by certain norms. Summarizing all of this in a single statement, we get what I shall call the Generalized Frege-Aquinas Model:

GFAM    To enjoy an act of reason of kind  $A$  with content  $P$  is to attach force  $F_A$  to a content  $P$ , which is to reflectively endorse the thereby constituted act as living up to the norms that essentially govern acts of kind  $A$ , thereby making it the case that the constituted act is a unified act of kind  $A$  and, hence, the norms apply.

If we accept the Generalized Frege-Aquinas Model, we have an answer to the question what it means to be a rational creature, in the sense of possessing rational capacities. To be a rational creature is to be able to enjoy acts that fit the template of GFAM. I want to suggest that this is a good way of thinking about rationality.

Why should this proposal be plausible or otherwise attractive? First of all, the Force Account of inference and what I said about judgment lends some support to the proposal. After all, inference and judgment fit the template of GFAM, and these are paradigmatic cases of acts of reason in a wide sense. Moreover, I cannot think of an act that fits GFAM and that is not arguably an act of reason in the wide sense. So the Generalized Frege-Aquinas Model yields the intuitively correct verdicts.

However, the proposal has other things going for it as well. In order to bring this out, I want to look at four features that acts of reason possess, according to GFAM. All of them strike me as features that we intuitively want to ascribe to acts of reason. Hence, that they fall out of my proposal speaks in favor of GFAM. Here is a list of the four features that I have in mind.

- (i)        We are in a distinctive way responsible for our acts of reason (in the wide sense) *qua* the acts they are.
- (ii)      They are governed by norms and, in particular, rational incompatibilities, and these norms and incompatibilities depend on the nature of the act at issue.

- (iii) We are active with respect to them.
- (iv) Acts of reason are reflective; they involve an understanding of themselves.

All of these features are familiar in some version or another, although some are more controversial than others. The Generalized Frege-Aquinas Model can not only accommodate all these points but it integrates these features into a unified account of acts of reason. Let me briefly explain how.

Let's begin with (i). What is distinctive about the way in which we are responsible for our acts of reason *qua* the acts they are? I think this comes out in the following example: If I criticize you by saying, "Your singing sounds terrible; you are such a bad singer," you can evade my criticism by replying, "All I want to do is to express myself; I don't particularly care about how it sounds; so I see nothing wrong with my singing." By contrast, if I criticize you by saying, "Your belief that *P* is false; you make such silly mistakes," you cannot evade my criticism by replying, "I just wanted to have the majority view; I don't particularly care about the truth of my beliefs; so I see nothing wrong with my belief."<sup>2</sup> The Generalized Frege-Aquinas Model can explain this because according to GFAM, you must endorse your acts of reason as living up to the norms that govern them *qua* the kind of acts they are. Singing is an intentional action; as such it is governed by norms of rationality but not by the norm that the singing ought to sound nice. The belief that *P*, by contrast, is *qua* the act it is governed by the norm that it ought to be true. Since you take your belief to be true in holding it, according to GFAM, you cannot evade my criticism that your belief is false. You cannot simply accept that your belief is false and add some remarks in your defense, as in the case of singing.

Let's turn to point (ii), i.e., the idea that acts of reason are governed by norms and, in particular, rational incompatibilities, and these norms and incompatibilities depend on the nature of the act at issue. The Generalized Frege-Aquinas Model accommodates this idea by presupposing that acts of reason are essentially governed by norms and by explaining IMA-like incompatibilities in terms of the reflective endorsement that constitutes the act.

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<sup>2</sup> Notice that this does not imply that the norms governing acts of reason are always externalist requirements. After all, I can criticize your acts of reason by saying, "Given that you want *A*, you should not intend to do *B*," or "Given your point of view, you should not have engaged in such-and-such an act of reason." The point is that the possibility of criticizing an act of reason as an act of reason is essential to such an act.



This means that the norms and incompatibilities depend on the nature of the act at issue. In fact, the Generalized Frege-Aquinas Model holds that acts of reason receive their nature from the endorsement of them as living up to the norms in question.

The fact that we are responsible for our acts of reason requires that we are in some sense active with respect to them, which was point (iii). After all, it seems unfair to hold someone responsible for something that merely happens to her. The relevant sense of activity must not, however, be confused with the idea of engaging in these acts at will. They are typically involuntarily wrung from us. After all, we are, e.g., sometimes convinced by an argument, although we would prefer not to hold the resulting belief.<sup>3</sup> Nevertheless, these acts issue from us; we are their authors. We are active in the sense that the act is constituted by an endorsement of the act as correct. That is, the way the agent sees the rational landscape immediately impinges on her acts of reason. The perspective of the agent is inseparable from the existence of the act. It is not that we can be held responsible because we are active. Rather, being responsible and being active are merely two sides of the same coin. The agent's endorsement—her activity—and the applicability of the norms—her responsibility—are inseparable in an act that fits GFAM.

Let's turn to the last point, (iv), namely that acts of reason are reflective. The idea that acts of reason are reflective is often formulated as the idea that acts of reason are essentially self-conscious. However, such a claim runs the risk of being understood as the claim that unconscious acts of reason are impossible. I submit that the way in which acts of reason are reflective or self-conscious is that they involve a positive evaluation of themselves. In order to evaluate itself positively, there must be a sense in which something in the act "is about the act itself." But the agent need not be aware of engaging in the act. Rather, acts of reason involve an understanding of themselves because they involve an appreciation of themselves as correct. If we understand point (iv) in this way, it is easy to see how the Generalized Frege-Aquinas Model captures this feature and unifies it with the other three features of acts of reason.

In order to clarify the last point, it may be helpful to contrast my way of thinking about the reflective nature of acts of reason with an alternative. One well-known way of

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<sup>3</sup> Aquinas makes this point in *De veritate*, q22, a5, ad3.

developing the idea that belief is reflective can be found in Davidson (1982; 1984). Davidson argues that only creatures who can interpret the speech of others can have beliefs because one cannot have the concept of a belief without interpreting language and one cannot have beliefs without having the concept of a belief. For my purposes the second point is the relevant one. Davidson's argument for this point is rather brief:

Can a creature have a belief if it does not have the concept of belief? It seems to me it cannot, and for this reason. Someone cannot have a belief unless he understands the possibility of being mistaken, and this requires grasping the contrast between truth and error—true belief and false belief. (Davidson, 1984, p. 170)

Davidson does not claim that whenever you believe something you also believe that you believe it (see Davidson, 1982, p. 326). Rather, his claim is that in order to have beliefs, you must be able to have beliefs about beliefs (under that description). In particular, you must be able to understand the idea of a false belief. In order to make this point, Davidson turns to the phenomenon of surprise.

Surprise requires that I be aware of a contrast between what I did believe and what I come to believe. Such awareness, however, is a belief about a belief: if I am surprised, then among other things I come to believe my original belief was false. I do not need to insist that every case of surprise involves a belief that a prior belief was false (though I am inclined to think so). What I do want to claim is that one cannot have a general stock of beliefs of the sort necessary for having any beliefs at all without being subject to surprises that involve beliefs about the correctness of one's own beliefs. Surprise about some things is a necessary and sufficient condition of thought in general. (Davidson, 1982, p. 326)

So Davidson thinks that the fact that one would be surprised implies that one is aware of one's beliefs; for otherwise one could not be aware of the contrast between these beliefs and what one came to believe.

The claim I want to make is stronger than Davidson's in that it applies to all acts of reason. In another respect, however, my claim is weaker than Davidson's because I don't think that the relevant kind of awareness is a belief. I think that Davidson is right that in order to have beliefs, you must—in a way—grasp the idea of a belief being false. However, this is so, I think, because every belief involves an appreciation of its own truth. Indeed, every act of reason involves an evaluation of itself as living up to the norms that govern it. In this way, the ability to grasp the distinction between correct and incorrect beliefs is built into the ability to have beliefs.

Davidson is right that we are typically surprised when we learn that one of our beliefs is false. This suggests that we take our beliefs to be true. As Davidson puts it: “to believe that  $p$  is not to be distinguished from the belief that  $p$  is true” (Davidson, 1984, p. 170). However, if we unconsciously believe that  $P$ , we might not be surprised to find out that it is not the case that  $P$ . Nevertheless, I think that Davidson is on the right track. What lies behind the phenomenon of surprise that Davidson discusses is the transparency of rational tensions such as those involved in IMA. Insofar as we believe that  $P$ , if we learn that  $P$  is false, we immediately appreciate the incompatibility between the two acts of the mind. And if I intend to do  $\phi$ , I immediately appreciate the incompatibility between this intention and a belief that doing  $A$  would be irrational. This is, I submit, what the reflective nature of acts of reason consists in. And it is captured by GFAM.

I hope that these remarks allow the reader to see the Force Account of inference as merely a special case of a general conception of acts of the intellect. In a nutshell, the general idea is that we engage in acts of reason by endorsing the acts as living up to the norms that essentially govern them. In other words, we manifest our rational capacities by taking the manifestation to be in accordance with the norms of rationality. In a slogan: To be rational—rather than arational—is to do things by taking them to be rational—rather than irrational.

## 8.0 BIBLIOGRAPHY

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